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DEPARTMENT OF COMMERCE  
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U. S. PETROLEUM OIL TABLES

Approved by  
The American Petroleum Institute,  
The U. S. Bureau of Mines, and  
The U. S. Bureau of Standards.

Reduction of Observed Degrees A.P.I. to Degrees A.P.I. at 60°F

This table shows the degrees A. P. I. at 60° F. of oils having, at the observed temperatures, the degrees A. P. I. indicated. For example, if the observed degrees A. P. I. at 78° F. is 20, the degrees A. P. I. at 60° F. will be 19. Intermediate values can be conveniently interpolated. For example, if the observed degrees A. P. I. at 78° is 20.4, the degrees A. P. I. at 60° F. will be 19.4.

The headings "Observed degrees A. P. I." and "Observed Temperature" signify the true indication of the hydrometer and the true temperature of the oil, that is, the observed readings corrected for instrumental errors. (The table is so computed as to take into account the thermal expansion of the glass of which the hydrometer is made.)

This table is based upon the results of an investigation conducted by the Bureau of Standards on the "Density and Thermal Expansion of American Petroleum Oils," and published as Technologic Paper No. 77. The same data were used in computing the tables published in Bureau of Standards Circular No. 57, "United States Standard Table for Petroleum Oils."

It is the intention of the Bureau to publish in the near future, this and other petroleum oil tables as a Bureau Circular.



Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
	Corresponding Degrees A.P.I. at 60°F.									
0	13.1	14.1	15.2	16.2	17.3	18.3	19.4	20.4	21.5	22.5
1	13.0	14.1	15.1	16.2	17.2	18.3	19.3	20.4	21.4	22.5
2	13.0	14.0	15.1	16.1	17.2	18.2	19.3	20.3	21.4	22.4
3	12.9	14.0	15.0	16.1	17.1	18.2	19.2	20.2	21.3	22.3
4	12.9	13.9	15.0	16.0	17.1	18.1	19.1	20.2	21.2	22.3
5	12.8	13.9	14.9	16.0	17.0	18.0	19.1	20.1	21.2	22.2
6	12.8	13.8	14.9	15.9	16.9	18.0	19.0	20.1	21.1	22.2
7	12.7	13.8	14.8	15.9	16.9	17.9	19.0	20.0	21.1	22.1
8	12.7	13.7	14.8	15.8	16.8	17.9	18.9	20.0	21.0	22.1
9	12.6	13.7	14.7	15.8	16.8	17.8	18.9	19.9	20.9	22.0
10	12.6	13.6	14.6	15.7	16.7	17.8	18.8	19.8	20.9	21.9
11	12.5	13.6	14.6	15.6	16.7	17.7	18.8	19.8	20.8	21.9
12	12.5	13.5	14.5	15.6	16.6	17.6	18.7	19.7	20.8	21.8
13	12.4	13.4	14.5	15.5	16.6	17.6	18.6	19.7	20.7	21.7
14	12.4	13.4	14.4	15.5	16.5	17.5	18.6	19.6	20.6	21.7
15	12.3	13.3	14.4	15.4	16.5	17.5	18.5	19.6	20.6	21.6
16	12.2	13.3	14.3	15.4	16.4	17.4	18.5	19.5	20.5	21.6
17	12.2	13.2	14.3	15.3	16.4	17.4	18.4	19.5	20.5	21.5
18	12.1	13.2	14.2	15.2	16.3	17.3	18.4	19.4	20.4	21.5
19	12.1	13.1	14.2	15.2	16.2	17.3	18.3	19.3	20.4	21.4
20	12.0	13.1	14.1	15.1	16.2	17.2	18.2	19.3	20.3	21.3
21	12.0	13.0	14.0	15.1	16.1	17.1	18.2	19.2	20.2	21.3
22	11.9	13.0	14.0	15.0	16.1	17.1	18.1	19.1	20.2	21.2
23	11.9	12.9	13.9	15.0	16.0	17.0	18.1	19.1	20.1	21.2
24	11.8	12.9	13.9	14.9	16.0	17.0	18.0	19.0	20.1	21.1
25	11.8	12.8	13.8	14.9	15.9	16.9	18.0	19.0	20.0	21.0
26	11.7	12.8	13.8	14.8	15.8	16.9	17.9	18.9	19.9	21.0
27	11.7	12.7	13.7	14.8	15.8	16.8	17.8	18.9	19.9	20.9
28	11.6	12.6	13.7	14.7	15.7	16.7	17.8	18.8	19.8	20.8
29	11.6	12.6	13.6	14.6	15.7	16.7	17.7	18.7	19.8	20.8
30	11.5	12.5	13.6	14.6	15.6	16.6	17.7	18.7	19.7	20.7
31	11.5	12.5	13.5	14.5	15.6	16.6	17.6	18.6	19.7	20.7
32	11.4	12.4	13.4	14.5	15.5	16.5	17.6	18.6	19.6	20.6
33	11.4	12.4	13.4	14.4	15.5	16.5	17.5	18.5	19.5	20.6
34	11.3	12.3	13.3	14.4	15.4	16.4	17.4	18.4	19.5	20.5
35	11.3	12.3	13.3	14.3	15.3	16.4	17.4	18.4	19.4	20.4
36	11.2	12.2	13.2	14.3	15.3	16.3	17.3	18.3	19.4	20.4
37	11.2	12.2	13.2	14.2	15.2	16.3	17.3	18.3	19.3	20.3
38	11.1	12.1	13.1	14.2	15.2	16.2	17.2	18.2	19.2	20.3
39	11.1	12.1	13.1	14.1	15.1	16.1	17.2	18.2	19.2	20.2
40	11.0	12.0	13.0	14.0	15.1	16.1	17.1	18.1	19.1	20.1
41	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.1	19.1	20.1
42	10.9	11.9	12.9	13.9	15.0	16.0	17.0	18.0	19.0	20.0
43	10.8	11.9	12.9	13.9	14.9	15.9	16.9	17.9	18.9	20.0
44	10.8	11.8	12.8	13.8	14.9	15.9	16.9	17.9	18.9	19.9
45	10.7	11.8	12.8	13.8	14.8	15.8	16.8	17.8	18.8	19.9
46	10.7	11.7	12.7	13.7	14.8	15.8	16.8	17.8	18.8	19.8
47	10.6	11.7	12.7	13.7	14.7	15.7	16.7	17.7	18.7	19.7
48	10.6	11.6	12.6	13.6	14.6	15.6	16.7	17.7	18.7	19.7
49	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6	19.6
50	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.6
51	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5
52	10.4	11.4	12.4	13.4	14.4	15.4	16.4	17.4	18.4	19.4
53	10.4	11.4	12.4	13.4	14.4	15.4	16.4	17.4	18.4	19.4
54	10.3	11.3	12.3	13.3	14.3	15.3	16.3	17.3	18.3	19.3
55	10.3	11.3	12.3	13.3	14.3	15.3	16.3	17.3	18.3	19.3
56	10.2	11.2	12.2	13.2	14.2	15.2	16.2	17.2	18.2	19.2
57	10.1	11.1	12.1	13.1	14.1	15.1	16.1	17.2	18.2	19.2
58	10.1	11.1	12.1	13.1	14.1	15.1	16.1	17.1	18.1	19.1
59	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
60	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
61	9.9	10.9	11.9	12.9	13.9	14.9	15.9	16.9	17.9	18.9
62	9.9	10.9	11.9	12.9	13.9	14.9	15.9	16.9	17.9	18.9
63	9.9	10.8	11.8	12.8	13.8	14.8	15.8	16.8	17.8	18.8
64	9.8	10.8	11.8	12.8	13.8	14.8	15.8	16.8	17.8	18.8





Observed Temperature in °F	Observed Degrees A.P.I.									
	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
	Corresponding Degrees A.P.I. at 60°F.									
65	9.8	10.7	11.7	12.7	13.7	14.7	15.7	16.7	17.7	18.7
66	9.7	10.7	11.7	12.7	13.7	14.7	15.7	16.7	17.7	18.7
67	9.7	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.6
68	9.6	10.6	11.6	12.6	13.6	14.6	15.6	16.6	17.6	18.5
69	9.6	10.6	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5
70	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.4	17.4	18.4
71	9.5	10.5	11.4	12.4	13.4	14.4	15.4	16.4	17.4	18.4
72	9.4	10.4	11.4	12.4	13.4	14.4	15.4	16.3	17.3	18.3
73	9.4	10.4	11.3	12.3	13.3	14.3	15.3	16.3	17.3	18.3
74	9.3	10.3	11.3	12.3	13.3	14.3	15.2	16.2	17.2	18.2
75	9.3	10.2	11.2	12.2	13.2	14.2	15.2	16.2	17.2	18.2
76	9.2	10.2	11.2	12.2	13.2	14.2	15.1	16.1	17.1	18.1
77	9.2	10.1	11.1	12.1	13.1	14.1	15.1	16.1	17.1	18.0
78	9.1	10.1	11.1	12.1	13.1	14.0	15.0	16.0	17.0	18.0
79	9.1	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	17.9
80	9.0	10.0	11.0	12.0	13.0	13.9	14.9	15.9	16.9	17.9
81	9.0	9.9	10.9	11.9	12.9	13.9	14.9	15.8	16.8	17.8
82	8.9	9.9	10.9	11.9	12.9	13.8	14.8	15.8	16.8	17.8
83	8.9	9.8	10.8	11.8	12.8	13.8	14.8	15.7	16.7	17.7
84	8.8	9.8	10.8	11.8	12.8	13.7	14.7	15.7	16.7	17.7
85	8.8	9.8	10.7	11.7	12.7	13.7	14.7	15.6	16.6	17.6
86	8.7	9.7	10.7	11.7	12.6	13.6	14.6	15.6	16.6	17.6
87	8.7	9.7	10.6	11.6	12.6	13.6	14.6	15.5	16.5	17.5
88	8.6	9.6	10.6	11.6	12.5	13.5	14.5	15.5	16.5	17.4
89	8.6	9.6	10.5	11.5	12.5	13.5	14.5	15.4	16.4	17.4
90	8.5	9.5	10.5	11.5	12.4	13.4	14.4	15.4	16.4	17.3
91	8.5	9.5	10.4	11.4	12.4	13.4	14.4	15.3	16.3	17.3
92	8.4	9.4	10.4	11.4	12.3	13.3	14.3	15.3	16.3	17.2
93	8.4	9.4	10.3	11.3	12.3	13.3	14.3	15.2	16.2	17.2
94	8.3	9.3	10.3	11.3	12.2	13.2	14.2	15.2	16.2	17.1
95	8.3	9.3	10.2	11.2	12.2	13.2	14.2	15.1	16.1	17.1
96	8.2	9.2	10.2	11.2	12.1	13.1	14.1	15.1	16.0	17.0
97	8.2	9.2	10.1	11.1	12.1	13.1	14.0	15.0	16.0	17.0
98	8.1	9.1	10.1	11.1	12.0	13.0	14.0	14.9	15.9	16.9
99	8.1	9.1	10.0	11.0	12.0	13.0	13.9	14.9	15.9	16.8
100	8.1	9.0	10.0	11.0	11.9	12.9	13.9	14.9	15.8	16.8
101	8.0	9.0	9.9	10.9	11.9	12.9	13.8	14.8	15.8	16.7
102	8.0	8.9	9.9	10.9	11.8	12.8	13.8	14.8	15.7	16.7
103	7.9	8.9	9.9	10.8	11.8	12.8	13.7	14.7	15.7	16.6
104	7.9	8.8	9.8	10.8	11.7	12.7	13.7	14.6	15.6	16.6
105	7.8	8.8	9.8	10.7	11.7	12.7	13.6	14.6	15.6	16.5
106	7.8	8.8	9.7	10.7	11.7	12.6	13.6	14.6	15.5	16.5
107	7.7	8.7	9.7	10.6	11.6	12.6	13.5	14.5	15.5	16.4
108	7.7	8.7	9.6	10.6	11.6	12.5	13.5	14.5	15.4	16.4
109	7.6	8.6	9.6	10.5	11.5	12.5	13.4	14.4	15.4	16.3
110	7.6	8.6	9.5	10.5	11.5	12.4	13.4	14.4	15.3	16.3
111	7.6	8.5	9.5	10.5	11.4	12.4	13.3	14.3	15.3	16.2
112	7.5	8.5	9.4	10.4	11.4	12.3	13.3	14.2	15.2	16.2
113	7.5	8.4	9.4	10.3	11.3	12.3	13.2	14.2	15.1	16.1
114	7.4	8.4	9.3	10.3	11.3	12.2	13.2	14.1	15.1	16.1
115	7.4	8.3	9.3	10.2	11.2	12.2	13.1	14.1	15.0	16.0
116	7.3	8.3	9.2	10.2	11.2	12.1	13.1	14.0	15.0	16.0
117	7.3	8.2	9.2	10.1	11.1	12.1	13.0	14.0	14.9	15.9
118	7.2	8.2	9.1	10.1	11.1	12.0	13.0	13.9	14.9	15.9
119	7.2	8.1	9.1	10.1	11.0	12.0	12.9	13.9	14.8	15.8
120	7.1	8.1	9.0	10.0	11.0	11.9	12.9	13.8	14.8	15.8
121	7.1	8.0	9.0	10.0	10.9	11.9	12.8	13.8	14.7	15.7
122	7.0	8.0	8.9	9.9	10.9	11.8	12.8	13.7	14.7	15.6
123	7.0	7.9	8.9	9.9	10.8	11.8	12.7	13.7	14.6	15.6
124	6.9	7.9	8.9	9.8	10.8	11.7	12.7	13.6	14.6	15.5
125	6.9	7.8	8.8	9.8	10.7	11.7	12.6	13.6	14.5	15.5
126	6.9	7.8	8.8	9.7	10.7	11.6	12.6	13.5	14.5	15.4
127	6.8	7.8	8.7	9.7	10.6	11.6	12.5	13.5	14.4	15.4
128	6.8	7.7	8.7	9.6	10.6	11.5	12.5	13.4	14.4	15.3
129	6.7	7.7	8.6	9.6	10.5	11.5	12.4	13.4	14.3	15.3

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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.



Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	10	11	12	13	14	15	16	17	18	19
	Corresponding Degrees A.P.I. at 60°F.									
130	6.7	7.6	8.6	9.5	10.5	11.4	12.4	13.3	14.3	15.2
131	6.6	7.6	8.5	9.5	10.4	11.4	12.3	13.3	14.2	15.2
132	6.6	7.5	8.5	9.4	10.4	11.3	12.3	13.2	14.2	15.1
133	6.5	7.5	8.4	9.4	10.3	11.3	12.2	13.2	14.1	15.1
134	6.5	7.4	8.4	9.3	10.3	11.2	12.2	13.1	14.1	15.0
135	6.4	7.4	8.3	9.3	10.2	11.2	12.1	13.1	14.0	15.0
136	6.4	7.4	8.3	9.3	10.2	11.1	12.1	13.0	14.0	14.9
137	6.4	7.3	8.2	9.2	10.1	11.1	12.0	13.0	13.9	14.9
138	6.3	7.3	8.2	9.2	10.1	11.0	12.0	12.9	13.9	14.8
139	6.3	7.2	8.2	9.1	10.1	11.0	11.9	12.9	13.8	14.8
140	6.2	7.2	8.1	9.1	10.0	10.9	11.9	12.8	13.8	14.7
141	6.2	7.1	8.1	9.0	10.0	10.9	11.8	12.8	13.7	14.6
142	6.1	7.1	8.0	9.0	9.9	10.8	11.8	12.7	13.7	14.6
143	6.1	7.0	8.0	8.9	9.9	10.8	11.8	12.7	13.6	14.6
144	6.0	7.0	7.9	8.9	9.8	10.7	11.7	12.6	13.6	14.5
145	6.0	6.9	7.9	8.8	9.8	10.7	11.7	12.6	13.5	14.5
146	6.0	6.9	7.8	8.8	9.7	10.6	11.6	12.5	13.5	14.4
147	5.9	6.9	7.8	8.7	9.7	10.6	11.6	12.5	13.4	14.4
148	5.9	6.8	7.7	8.7	9.6	10.6	11.5	12.4	13.4	14.3
149	5.8	6.8	7.7	8.7	9.6	10.5	11.5	12.4	13.3	14.3
150	5.8	6.7	7.7	8.6	9.5	10.5	11.4	12.3	13.3	14.2
151	5.7	6.7	7.6	8.6	9.5	10.4	11.4	12.3	13.2	14.2
152	5.7	6.6	7.6	8.5	9.4	10.4	11.3	12.2	13.2	14.1
153	5.6	6.6	7.5	8.5	9.4	10.3	11.3	12.2	13.1	14.1
154	5.6	6.5	7.5	8.4	9.4	10.3	11.2	12.1	13.1	14.0
155	5.6	6.5	7.4	8.4	9.3	10.2	11.2	12.1	13.0	14.0
156	5.5	6.4	7.4	8.3	9.3	10.2	11.1	12.0	13.0	13.9
157	5.5	6.4	7.3	8.3	9.2	10.1	11.1	12.0	12.9	13.8
158	5.4	6.4	7.3	8.2	9.2	10.1	11.0	11.9	12.9	13.8
159	5.4	6.3	7.3	8.2	9.1	10.0	11.0	11.9	12.8	13.7
160	5.3	6.3	7.2	8.1	9.1	10.0	10.9	11.8	12.8	13.7
161	5.3	6.2	7.2	8.1	9.0	10.0	10.9	11.8	12.7	13.6
162	5.3	6.2	7.1	8.1	9.0	9.9	10.8	11.7	12.7	13.6
163	5.2	6.2	7.1	8.0	8.9	9.9	10.8	11.7	12.6	13.5
164	5.2	6.1	7.0	8.0	8.9	9.8	10.7	11.7	12.6	13.5
165	5.1	6.1	7.0	7.9	8.8	9.8	10.7	11.6	12.5	13.4
166	5.1	6.0	6.9	7.9	8.8	9.7	10.6	11.6	12.5	13.4
167	5.0	6.0	6.9	7.8	8.7	9.7	10.6	11.5	12.4	13.3
168	5.0	5.9	6.9	7.8	8.7	9.6	10.6	11.5	12.4	13.3
169	5.0	5.9	6.8	7.8	8.7	9.6	10.5	11.4	12.3	13.3
170	4.9	5.9	6.8	7.7	8.6	9.5	10.5	11.4	12.3	13.2
171	4.9	5.8	6.7	7.7	8.6	9.5	10.4	11.3	12.2	13.2
172	4.9	5.8	6.7	7.6	8.5	9.5	10.4	11.3	12.2	13.1
173	4.8	5.7	6.7	7.6	8.5	9.4	10.3	11.2	12.1	13.1
174	4.8	5.7	6.6	7.6	8.5	9.4	10.3	11.2	12.1	13.0
175	4.7	5.6	6.6	7.5	8.4	9.3	10.2	11.2	12.1	13.0
176	4.7	5.6	6.5	7.5	8.4	9.3	10.2	11.1	12.0	12.9
177	4.7	5.6	6.5	7.4	8.3	9.2	10.1	11.1	12.0	12.9
178	4.6	5.5	6.4	7.4	8.3	9.2	10.1	11.0	11.9	12.8
179	4.6	5.5	6.4	7.3	8.2	9.2	10.1	11.0	11.9	12.8
180	4.5	5.4	6.4	7.3	8.2	9.1	10.0	10.9	11.8	12.7
181	4.5	5.4	6.3	7.3	8.2	9.1	10.0	10.9	11.8	12.7
182	4.4	5.4	6.3	7.2	8.1	9.0	9.9	10.8	11.7	12.6
183	4.4	5.3	6.2	7.2	8.1	9.0	9.9	10.8	11.7	12.6
184	4.3	5.3	6.2	7.1	8.0	8.9	9.8	10.7	11.6	12.5
185	4.3	5.2	6.1	7.1	8.0	8.9	9.8	10.7	11.6	12.5
186	4.3	5.2	6.1	7.0	7.9	8.8	9.8	10.6	11.6	12.5
187	4.2	5.1	6.1	7.0	7.9	8.8	9.7	10.6	11.5	12.4
188	4.2	5.1	6.0	6.9	7.8	8.7	9.7	10.6	11.5	12.4
189	4.1	5.0	6.0	6.9	7.8	8.7	9.6	10.5	11.4	12.3
190	4.1	5.0	5.9	6.8	7.8	8.7	9.6	10.5	11.4	12.3
191	4.1	5.0	5.9	6.8	7.7	8.6	9.5	10.4	11.3	12.2
192	4.0	4.9	5.8	6.8	7.7	8.6	9.5	10.4	11.3	12.2
193	4.0	4.9	5.8	6.7	7.6	8.5	9.4	10.3	11.2	12.1
194	3.9	4.9	5.8	6.7	7.6	8.5	9.4	10.3	11.2	12.1
195	3.9	4.8	5.7	6.6	7.5	8.4	9.3	10.2	11.1	12.0





Observed Temperature in °F	Observed Degrees A.P.I.									
	20°	21°	22°	23°	24°	25°	26°	27°	28°	29°
	Corresponding Degrees A.P.I. at 60°F									
0	23.6	24.6	25.7	26.8	27.8	28.9	30.0	31.0	32.1	33.2
1	23.5	24.6	25.6	26.7	27.8	28.8	29.9	31.0	32.0	33.1
2	23.5	24.5	25.6	26.6	27.7	28.7	29.8	30.9	31.9	33.0
3	23.4	24.4	25.5	26.5	27.6	28.7	29.7	30.8	31.8	32.9
4	23.3	24.4	25.4	26.5	27.5	28.6	29.6	30.7	31.8	32.8
5	23.3	24.3	25.4	26.4	27.5	28.5	29.6	30.6	31.7	32.8
6	23.2	24.2	25.3	26.3	27.4	28.5	29.5	30.6	31.6	32.7
7	23.1	24.2	25.2	26.3	27.3	28.4	29.4	30.5	31.6	32.6
8	23.1	24.1	25.2	26.2	27.3	28.3	29.4	30.4	31.5	32.6
9	23.0	24.1	25.1	26.2	27.2	28.3	29.3	30.4	31.4	32.5
10	23.0	24.0	25.0	26.1	27.1	28.2	29.2	30.3	31.3	32.4
11	22.9	23.9	25.0	26.0	27.1	28.1	29.2	30.2	31.3	32.3
12	22.8	23.9	24.9	26.0	27.0	28.1	29.1	30.2	31.2	32.3
13	22.8	23.8	24.9	25.9	26.9	28.0	29.0	30.1	31.1	32.2
14	22.7	23.7	24.8	25.8	26.9	27.9	29.0	30.0	31.1	32.1
15	22.7	23.7	24.7	25.8	26.8	27.9	28.9	30.0	31.0	32.0
16	22.6	23.6	24.7	25.7	26.7	27.8	28.8	29.9	30.9	32.0
17	22.6	23.6	24.6	25.7	26.7	27.7	28.8	29.8	30.9	31.9
18	22.5	23.5	24.6	25.6	26.6	27.7	28.7	29.8	30.8	31.8
19	22.4	23.4	24.5	25.5	26.5	27.6	28.6	29.7	30.7	31.8
20	22.4	23.4	24.4	25.5	26.5	27.5	28.6	29.6	30.7	31.7
21	22.3	23.3	24.4	25.4	26.4	27.5	28.5	29.5	30.6	31.6
22	22.2	23.3	24.3	25.3	26.4	27.4	28.4	29.5	30.5	31.6
23	22.2	23.2	24.3	25.3	26.3	27.3	28.4	29.4	30.4	31.5
24	22.1	23.1	24.2	25.2	26.2	27.3	28.3	29.3	30.4	31.4
25	22.1	23.1	24.1	25.2	26.2	27.2	28.3	29.3	30.3	31.4
26	22.0	23.0	24.1	25.1	26.1	27.1	28.2	29.2	30.2	31.3
27	21.9	23.0	24.0	25.0	26.0	27.1	28.1	29.1	30.2	31.2
28	21.9	22.9	23.9	24.9	26.0	27.0	28.0	29.1	30.1	31.1
29	21.8	22.8	23.8	24.9	25.9	26.9	28.0	29.0	30.0	31.1
30	21.7	22.8	23.8	24.8	25.8	26.9	27.9	28.9	30.0	31.0
31	21.7	22.7	23.7	24.7	25.8	26.8	27.8	28.9	29.9	30.9
32	21.6	22.7	23.7	24.7	25.7	26.8	27.8	28.8	29.8	30.9
33	21.6	22.6	23.6	24.6	25.7	26.7	27.7	28.7	29.8	30.8
34	21.5	22.5	23.6	24.6	25.6	26.6	27.7	28.7	29.7	30.7
35	21.4	22.5	23.5	24.5	25.5	26.6	27.6	28.6	29.6	30.7
36	21.4	22.4	23.4	24.4	25.5	26.5	27.5	28.5	29.6	30.6
37	21.3	22.3	23.4	24.4	25.4	26.4	27.4	28.5	29.5	30.5
38	21.3	22.3	23.3	24.3	25.3	26.3	27.4	28.4	29.4	30.4
39	21.2	22.2	23.3	24.3	25.3	26.3	27.3	28.3	29.4	30.4
40	21.2	22.2	23.2	24.2	25.2	26.2	27.3	28.3	29.3	30.3
41	21.1	22.1	23.1	24.2	25.2	26.2	27.2	28.2	29.2	30.3
42	21.0	22.1	23.1	24.1	25.1	26.1	27.1	28.2	29.2	30.2
43	21.0	22.0	23.0	24.0	25.0	26.0	27.1	28.1	29.1	30.1
44	20.9	21.9	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0
45	20.9	21.9	22.9	23.9	24.9	25.9	26.9	28.0	29.0	30.0
46	20.8	21.8	22.8	23.8	24.8	25.9	26.9	27.9	28.9	29.9
47	20.7	21.7	22.8	23.8	24.8	25.8	26.8	27.8	28.8	29.8
48	20.7	21.7	22.7	23.7	24.7	25.7	26.8	27.8	28.8	29.8
49	20.6	21.6	22.7	23.7	24.7	25.7	26.7	27.7	28.7	29.7
50	20.6	21.6	22.6	23.6	24.6	25.6	26.6	27.6	28.7	29.7
51	20.5	21.5	22.5	23.5	24.5	25.5	26.6	27.6	28.6	29.6
52	20.5	21.5	22.5	23.5	24.5	25.5	26.5	27.5	28.5	29.5
53	20.4	21.4	22.4	23.4	24.4	25.4	26.4	27.4	28.5	29.5
54	20.3	21.3	22.3	23.3	24.4	25.4	26.4	27.4	28.4	29.4
55	20.3	21.3	22.3	23.3	24.3	25.3	26.3	27.3	28.3	29.3
56	20.2	21.2	22.2	23.2	24.2	25.2	26.2	27.3	28.3	29.3
57	20.2	21.2	22.2	23.2	24.2	25.2	26.2	27.2	28.2	29.2
58	20.1	21.1	22.1	23.1	24.1	25.1	26.1	27.1	28.1	29.1
59	20.1	21.1	22.1	23.1	24.1	25.1	26.1	27.1	28.1	29.1
60	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
61	19.9	20.9	21.9	22.9	23.9	24.9	25.9	26.9	27.9	28.9
62	19.9	20.9	21.9	22.9	23.9	24.9	25.9	26.9	27.9	28.9
63	19.8	20.8	21.8	22.8	23.8	24.8	25.8	26.8	27.8	28.8
64	19.8	20.8	21.8	22.8	23.8	24.8	25.8	26.8	27.8	28.8





Observed Temperature in °F	Observed Degrees A.P.I.									
	20	21	22	23	24	25	26	27	28	29
	Corresponding Degrees A.P.I. at 60°F									
65	19.7	20.7	21.7	22.7	23.7	24.7	25.7	26.7	27.7	28.7
66	19.7	20.7	21.7	22.6	23.6	24.6	25.6	26.6	27.6	28.6
67	19.6	20.6	21.6	22.6	23.6	24.6	25.6	26.6	27.6	28.5
68	19.5	20.5	21.5	22.5	23.5	24.5	25.5	26.5	27.5	28.5
69	19.5	20.5	21.5	22.4	23.4	24.4	25.4	26.4	27.4	28.4
70	19.4	20.4	21.4	22.4	23.4	24.4	25.4	26.4	27.4	28.3
71	19.4	20.4	21.4	22.3	23.3	24.3	25.3	26.3	27.3	28.3
72	19.3	20.3	21.3	22.3	23.3	24.3	25.2	26.2	27.2	28.2
73	19.2	20.2	21.2	22.2	23.2	24.2	25.2	26.2	27.2	28.2
74	19.2	20.2	21.2	22.2	23.1	24.1	25.1	26.1	27.1	28.1
75	19.1	20.1	21.1	22.1	23.1	24.1	25.1	26.0	27.0	28.0
76	19.1	20.1	21.1	22.0	23.0	24.0	25.0	26.0	27.0	28.0
77	19.0	20.0	21.0	22.0	23.0	24.0	25.0	25.9	26.9	27.9
78	19.0	19.9	20.9	21.9	22.9	23.9	24.9	25.9	26.8	27.8
79	18.9	19.9	20.9	21.8	22.8	23.8	24.8	25.8	26.8	27.8
80	18.9	19.9	20.8	21.8	22.8	23.8	24.8	25.7	26.7	27.7
81	18.8	19.8	20.8	21.7	22.7	23.7	24.7	25.7	26.7	27.6
82	18.7	19.7	20.7	21.7	22.7	23.6	24.6	25.6	26.6	27.6
83	18.7	19.7	20.6	21.6	22.6	23.6	24.6	25.5	26.5	27.5
84	18.6	19.6	20.6	21.6	22.6	23.5	24.5	25.5	26.5	27.4
85	18.6	19.5	20.5	21.5	22.5	23.5	24.5	25.4	26.4	27.4
86	18.5	19.5	20.5	21.4	22.4	23.4	24.4	25.4	26.3	27.3
87	18.4	19.4	20.4	21.4	22.4	23.3	24.3	25.3	26.3	27.3
88	18.4	19.4	20.4	21.3	22.3	23.3	24.3	25.2	26.2	27.2
89	18.3	19.3	20.3	21.3	22.2	23.2	24.2	25.2	26.2	27.1
90	18.3	19.3	20.3	21.2	22.2	23.2	24.2	25.1	26.1	27.1
91	18.2	19.2	20.2	21.2	22.1	23.1	24.1	25.1	26.0	27.0
92	18.2	19.2	20.1	21.1	22.1	23.0	24.0	25.0	26.0	26.9
93	18.1	19.1	20.1	21.0	22.0	23.0	24.0	24.9	25.9	26.9
94	18.1	19.0	20.0	21.0	22.0	22.9	23.9	24.9	25.9	26.8
95	18.0	19.0	20.0	20.9	21.9	22.9	23.8	24.8	25.8	26.8
96	18.0	18.9	19.9	20.9	21.9	22.8	23.8	24.8	25.8	26.7
97	17.9	18.9	19.9	20.8	21.8	22.8	23.7	24.7	25.7	26.6
98	17.9	18.8	19.8	20.8	21.7	22.7	23.7	24.6	25.6	26.6
99	17.8	18.8	19.8	20.7	21.7	22.7	23.6	24.6	25.6	26.5
100	17.8	18.7	19.7	20.7	21.6	22.6	23.6	24.5	25.5	26.5
101	17.7	18.7	19.6	20.6	21.6	22.5	23.5	24.5	25.4	26.4
102	17.6	18.6	19.6	20.5	21.5	22.5	23.4	24.4	25.4	26.3
103	17.6	18.6	19.5	20.5	21.5	22.4	23.4	24.4	25.3	26.3
104	17.5	18.5	19.5	20.4	21.4	22.3	23.3	24.3	25.2	26.2
105	17.5	18.5	19.4	20.4	21.3	22.3	23.3	24.2	25.2	26.1
106	17.4	18.4	19.4	20.3	21.3	22.2	23.2	24.2	25.1	26.1
107	17.4	18.4	19.3	20.3	21.2	22.2	23.2	24.1	25.1	26.0
108	17.3	18.3	19.3	20.2	21.2	22.1	23.1	24.0	25.0	25.9
109	17.3	18.3	19.2	20.2	21.1	22.1	23.0	24.0	24.9	25.9
110	17.2	18.2	19.2	20.1	21.1	22.0	23.0	23.9	24.9	25.8
111	17.2	18.1	19.1	20.1	21.0	22.0	22.9	23.9	24.8	25.8
112	17.1	18.1	19.0	20.0	20.9	21.9	22.9	23.8	24.8	25.7
113	17.1	18.0	19.0	19.9	20.9	21.8	22.8	23.7	24.7	25.6
114	17.0	18.0	18.9	19.9	20.8	21.8	22.8	23.7	24.7	25.6
115	17.0	17.9	18.9	19.8	20.8	21.7	22.7	23.6	24.6	25.5
116	16.9	17.9	18.8	19.8	20.7	21.7	22.6	23.6	24.5	25.5
117	16.9	17.8	18.8	19.7	20.7	21.6	22.6	23.5	24.5	25.4
118	16.8	17.8	18.7	19.7	20.6	21.6	22.5	23.5	24.4	25.3
119	16.8	17.7	18.7	19.6	20.6	21.5	22.5	23.4	24.4	25.3
120	16.7	17.7	18.6	19.6	20.5	21.4	22.4	23.3	24.3	25.2
121	16.6	17.6	18.5	19.5	20.4	21.4	22.3	23.3	24.2	25.2
122	16.6	17.5	18.5	19.4	20.4	21.3	22.3	23.2	24.2	25.1
123	16.5	17.5	18.4	19.4	20.3	21.3	22.2	23.2	24.1	25.1
124	16.5	17.4	18.4	19.3	20.3	21.2	22.2	23.1	24.1	25.0
125	16.4	17.4	18.3	19.3	20.2	21.2	22.1	23.1	24.0	24.9
126	16.4	17.3	18.3	19.2	20.2	21.1	22.1	23.0	24.0	24.9
127	16.3	17.3	18.2	19.2	20.1	21.0	22.0	22.9	23.9	24.8
128	16.3	17.2	18.2	19.1	20.1	21.0	21.9	22.9	23.8	24.8
129	16.2	17.2	18.1	19.1	20.0	20.9	21.9	22.8	23.8	24.7





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	20	21	22	23	24	25	26	27	28	29
	Corresponding Degrees A.P.I. at 60°F									
130	16.2	17.1	18.1	19.0	19.9	20.9	21.8	22.8	23.7	24.6
131	16.1	17.0	18.0	18.9	19.9	20.8	21.8	22.7	23.6	24.6
132	16.1	17.0	18.0	18.9	19.8	20.8	21.7	22.7	23.6	24.5
133	16.0	16.9	17.9	18.8	19.8	20.7	21.7	22.6	23.5	24.5
134	16.0	16.9	17.9	18.8	19.7	20.6	21.6	22.5	23.5	24.4
135	15.9	16.8	17.8	18.7	19.7	20.6	21.6	22.5	23.4	24.4
136	15.9	16.8	17.7	18.7	19.6	20.5	21.5	22.4	23.4	24.3
137	15.8	16.7	17.7	18.6	19.6	20.5	21.4	22.4	23.3	24.2
138	15.8	16.7	17.6	18.6	19.5	20.4	21.4	22.3	23.2	24.2
139	15.7	16.6	17.6	18.5	19.4	20.4	21.3	22.2	23.2	24.1
140	15.6	16.6	17.5	18.5	19.4	20.3	21.3	22.2	23.1	24.0
141	15.6	16.5	17.5	18.4	19.3	20.3	21.2	22.1	23.1	24.0
142	15.5	16.5	17.4	18.4	19.3	20.2	21.2	22.1	23.0	23.9
143	15.5	16.4	17.4	18.3	19.2	20.2	21.1	22.0	23.0	23.9
144	15.4	16.4	17.3	18.3	19.2	20.1	21.0	22.0	23.9	23.8
145	15.4	16.3	17.3	18.2	19.1	20.0	21.0	21.9	22.9	23.8
146	15.3	16.3	17.2	18.2	19.1	20.0	20.9	21.9	22.8	23.7
147	15.3	16.2	17.2	18.1	19.0	19.9	20.9	21.8	22.7	23.6
148	15.2	16.2	17.1	18.0	18.9	19.9	20.8	21.8	22.7	23.6
149	15.2	16.1	17.0	18.0	18.9	19.8	20.8	21.7	22.6	23.5
150	15.1	16.1	17.0	17.9	18.8	19.8	20.7	21.7	22.6	23.5
151	15.1	16.0	16.9	17.9	18.8	19.7	20.7	21.6	22.5	23.4
152	15.0	16.0	16.9	17.8	18.7	19.7	20.6	21.5	22.5	23.4
153	15.0	15.9	16.8	17.8	18.7	19.6	20.6	21.5	22.4	23.3
154	14.9	15.9	16.8	17.7	18.6	19.6	20.5	21.4	22.3	23.3
155	14.9	15.8	16.7	17.7	18.6	19.5	20.5	21.4	22.3	23.2
156	14.8	15.7	16.7	17.6	18.5	19.4	20.4	21.3	22.2	23.2
157	14.8	15.7	16.6	17.6	18.5	19.4	20.3	21.3	22.2	23.1
158	14.7	15.6	16.6	17.5	18.4	19.3	20.3	21.2	22.1	23.0
159	14.7	15.6	16.5	17.4	18.4	19.3	20.2	21.1	22.1	23.0
160	14.6	15.5	16.5	17.4	18.3	19.2	20.2	21.1	22.0	22.9
161	14.6	15.5	16.4	17.3	18.3	19.2	20.1	21.0	21.9	22.9
162	14.5	15.4	16.4	17.3	18.2	19.1	20.1	21.0	21.9	22.8
163	14.5	15.4	16.3	17.2	18.2	19.1	20.0	20.9	21.8	22.7
164	14.4	15.3	16.3	17.2	18.1	19.0	19.9	20.9	21.8	22.7
165	14.4	15.3	16.2	17.1	18.0	18.9	19.9	20.8	21.7	22.6
166	14.3	15.2	16.2	17.1	18.0	18.9	19.8	20.7	21.7	22.6
167	14.3	15.2	16.1	17.0	17.9	18.8	19.8	20.7	21.6	22.5
168	14.2	15.1	16.1	17.0	17.9	18.8	19.7	20.6	21.6	22.5
169	14.2	15.1	16.0	16.9	17.8	18.7	19.7	20.6	21.5	22.4
170	14.1	15.0	16.0	16.9	17.8	18.7	19.6	20.5	21.4	22.3
171	14.1	15.0	15.9	16.8	17.7	18.6	19.6	20.5	21.4	22.3
172	14.0	14.9	15.9	16.8	17.7	18.6	19.5	20.4	21.3	22.2
173	14.0	14.9	15.8	16.7	17.6	18.5	19.5	20.4	21.3	22.2
174	13.9	14.8	15.8	16.7	17.6	18.5	19.4	20.3	21.2	22.1
175	13.9	14.8	15.7	16.6	17.5	18.4	19.3	20.3	21.2	22.1
176	13.8	14.7	15.7	16.6	17.5	18.4	19.3	20.2	21.1	22.0
177	13.8	14.7	15.6	16.5	17.4	18.3	19.2	20.1	21.0	21.9
178	13.7	14.6	15.6	16.5	17.4	18.3	19.2	20.1	21.0	21.9
179	13.7	14.6	15.5	16.4	17.3	18.2	19.1	20.0	20.9	21.8
180	13.6	14.6	15.5	16.4	17.3	18.2	19.1	20.0	20.9	21.8
181	13.6	14.5	15.4	16.3	17.2	18.1	19.0	19.9	20.8	21.7
182	13.5	14.5	15.4	16.3	17.2	18.1	19.0	19.9	20.8	21.7
183	13.5	14.4	15.3	16.2	17.1	18.0	18.9	19.8	20.7	21.6
184	13.4	14.4	15.3	16.2	17.1	18.0	18.9	19.8	20.7	21.6
185	13.4	14.3	15.2	16.1	17.0	17.9	18.8	19.7	20.6	21.5
186	13.4	14.3	15.2	16.1	17.0	17.9	18.8	19.7	20.6	21.4
187	13.3	14.2	15.1	16.0	16.9	17.8	18.7	19.6	20.5	21.4
188	13.3	14.2	15.1	16.0	16.9	17.8	18.7	19.6	20.5	21.3
189	13.2	14.1	15.0	15.9	16.8	17.7	18.6	19.5	20.4	21.3
190	13.2	14.1	15.0	15.9	16.8	17.7	18.6	19.5	20.3	21.2
191	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.4	20.3	21.2
192	13.1	14.0	14.9	15.8	16.7	17.6	18.4	19.3	20.2	21.1
193	13.0	13.9	14.8	15.7	16.6	17.5	18.4	19.3	20.2	21.1
194	13.0	13.9	14.8	15.7	16.6	17.4	18.3	19.2	20.1	21.0
195	12.9	13.8	14.7	15.6	16.5	17.4	18.3	19.2	20.1	21.0





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	30°	31°	32°	33°	34°	35°	36°	37°	38°	39°
	Corresponding Degrees A.P.I. at 60°F.									
0	34.2	35.3	36.4	37.4	38.5	39.6	40.7	41.8	42.9	44.0
1	34.1	35.2	36.3	37.3	38.4	39.5	40.6	41.7	42.8	43.9
2	34.0	35.1	36.2	37.2	38.3	39.4	40.5	41.6	42.7	43.8
3	34.0	35.0	36.1	37.2	38.2	39.3	40.4	41.5	42.6	43.7
4	33.9	34.9	36.0	37.1	38.2	39.2	40.3	41.4	42.5	43.6
5	33.8	34.9	36.0	37.0	38.1	39.2	40.2	41.3	42.4	43.5
6	33.7	34.8	35.9	36.9	38.0	39.1	40.1	41.2	42.3	43.4
7	33.7	34.7	35.8	36.8	37.9	39.0	40.1	41.1	42.2	43.3
8	33.6	34.7	35.7	36.8	37.8	38.9	40.0	41.1	42.1	43.2
9	33.5	34.6	35.7	36.7	37.8	38.9	39.9	41.0	42.1	43.1
10	33.4	34.5	35.6	36.6	37.7	38.8	39.8	40.9	42.0	43.1
11	33.4	34.4	35.5	36.5	37.6	38.7	39.7	40.8	41.9	43.0
12	33.3	34.4	35.4	36.5	37.5	38.6	39.7	40.7	41.8	42.9
13	33.2	34.3	35.3	36.4	37.5	38.5	39.6	40.6	41.7	42.8
14	33.1	34.2	35.3	36.3	37.4	38.5	39.5	40.6	41.6	42.7
15	33.1	34.1	35.2	36.2	37.3	38.4	39.4	40.5	41.6	42.6
16	33.0	34.1	35.1	36.2	37.2	38.3	39.3	40.4	41.5	42.5
17	32.9	34.0	35.0	36.1	37.1	38.2	39.3	40.3	41.4	42.5
18	32.9	33.9	35.0	36.0	37.1	38.2	39.2	40.3	41.3	42.4
19	32.8	33.8	34.9	36.0	37.0	38.1	39.1	40.2	41.2	42.3
20	32.7	33.8	34.8	35.9	36.9	38.0	39.0	40.1	41.2	42.2
21	32.6	33.7	34.7	35.8	36.8	37.9	39.0	40.0	41.1	42.1
22	32.6	33.6	34.7	35.7	36.8	37.8	38.9	39.9	41.0	42.1
23	32.5	33.6	34.6	35.7	36.7	37.8	38.8	39.9	40.9	42.0
24	32.4	33.5	34.5	35.6	36.6	37.7	38.7	39.8	40.8	41.9
25	32.4	33.4	34.5	35.5	36.5	37.6	38.6	39.7	40.7	41.8
26	32.3	33.3	34.4	35.4	36.5	37.5	38.6	39.6	40.7	41.7
27	32.2	33.3	34.3	35.3	36.4	37.4	38.5	39.5	40.6	41.6
28	32.2	33.2	34.2	35.3	36.3	37.4	38.4	39.4	40.5	41.5
29	32.1	33.1	34.2	35.2	36.2	37.3	38.3	39.4	40.4	41.5
30	32.0	33.0	34.1	35.1	36.1	37.2	38.2	39.3	40.3	41.4
31	31.9	33.0	34.0	35.0	36.1	37.1	38.2	39.2	40.3	41.3
32	31.9	32.9	34.0	35.0	36.0	37.1	38.1	39.1	40.2	41.2
33	31.8	32.8	33.9	34.9	35.9	37.0	38.0	39.0	40.1	41.1
34	31.7	32.8	33.8	34.8	35.9	36.9	37.9	39.0	40.0	41.1
35	31.7	32.7	33.7	34.8	35.8	36.8	37.9	38.9	40.0	41.0
36	31.6	32.6	33.7	34.7	35.7	36.8	37.8	38.8	39.9	40.9
37	31.5	32.6	33.6	34.6	35.6	36.7	37.7	38.7	39.8	40.8
38	31.5	32.5	33.5	34.6	35.6	36.6	37.6	38.7	39.7	40.7
39	31.4	32.4	33.5	34.5	35.5	36.5	37.6	38.6	39.6	40.7
40	31.3	32.3	33.4	34.4	35.4	36.5	37.5	38.5	39.5	40.6
41	31.3	32.3	33.3	34.3	35.4	36.4	37.4	38.4	39.4	40.5
42	31.2	32.2	33.2	34.3	35.3	36.3	37.3	38.3	39.4	40.4
43	31.1	32.1	33.2	34.2	35.2	36.2	37.2	38.2	39.3	40.3
44	31.0	32.1	33.1	34.1	35.1	36.2	37.2	38.2	39.2	40.3
45	31.0	32.0	33.0	34.1	35.1	36.1	37.1	38.1	39.2	40.2
46	30.9	31.9	32.9	34.0	35.0	36.0	37.0	38.1	39.1	40.1
47	30.8	31.9	32.9	33.9	34.9	36.0	37.0	38.0	39.0	40.0
48	30.8	31.8	32.8	33.8	34.8	35.9	36.9	37.9	38.9	40.0
49	30.7	31.7	32.8	33.8	34.8	35.8	36.8	37.8	38.8	39.9
50	30.7	31.7	32.7	33.7	34.7	35.7	36.7	37.7	38.8	39.8
51	30.6	31.6	32.6	33.6	34.7	35.7	36.7	37.7	38.7	39.7
52	30.5	31.5	32.6	33.6	34.6	35.6	36.6	37.6	38.6	39.6
53	30.4	31.5	32.5	33.5	34.5	35.5	36.5	37.5	38.5	39.6
54	30.4	31.4	32.4	33.4	34.4	35.4	36.4	37.5	38.5	39.5
55	30.3	31.3	32.3	33.4	34.4	35.4	36.4	37.4	38.4	39.4
56	30.2	31.2	32.3	33.3	34.3	35.3	36.3	37.3	38.3	39.3
57	30.2	31.2	32.2	33.2	34.2	35.2	36.2	37.2	38.2	39.2
58	30.1	31.1	32.1	33.1	34.1	35.1	36.1	37.1	38.1	39.2
59	30.0	31.0	32.1	33.1	34.1	35.1	36.1	37.1	38.1	39.1
60	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
61	29.9	30.9	31.9	32.9	33.9	34.9	35.9	36.9	37.9	38.9
62	29.9	30.9	31.9	32.9	33.9	34.9	35.9	36.9	37.9	38.9
63	29.8	30.8	31.8	32.8	33.8	34.8	35.8	36.8	37.8	38.8
64	29.7	30.7	31.7	32.7	33.7	34.7	35.7	36.7	37.7	38.7





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	30	31	32	33	34	35	36	37	38	39
	Corresponding Degrees A.P.I. at 60°F.									
65	29.7	30.7	31.7	32.7	33.7	34.7	35.6	36.6	37.6	38.6
66	29.6	30.6	31.6	32.6	33.6	34.6	35.6	36.6	37.6	38.6
67	29.5	30.5	31.5	32.5	33.5	34.5	35.5	36.5	37.5	38.5
68	29.5	30.5	31.5	32.4	33.4	34.4	35.4	36.4	37.4	38.4
69	29.4	30.4	31.4	32.4	33.4	34.4	35.3	36.3	37.3	38.3
70	29.3	30.3	31.3	32.3	33.3	34.3	35.3	36.2	37.2	38.2
71	29.3	30.2	31.2	32.2	33.2	34.2	35.2	36.2	37.2	38.2
72	29.2	30.2	31.2	32.2	33.1	34.1	35.1	36.1	37.1	38.1
73	29.1	30.1	31.1	32.1	33.1	34.1	35.0	36.0	37.0	38.0
74	29.1	30.0	31.0	32.0	33.0	34.0	35.0	36.0	36.9	37.9
75	29.0	30.0	31.0	31.9	32.9	33.9	34.9	35.9	36.9	37.9
76	28.9	29.9	30.9	31.9	32.9	33.9	34.8	35.8	36.8	37.8
77	28.9	29.9	30.9	31.8	32.8	33.8	34.8	35.7	36.7	37.7
78	28.8	29.8	30.8	31.7	32.7	33.7	34.7	35.7	36.7	37.6
79	28.7	29.7	30.7	31.7	32.6	33.6	34.6	35.6	36.6	37.6
80	28.7	29.6	30.6	31.6	32.6	33.6	34.6	35.5	36.5	37.5
81	28.6	29.6	30.6	31.5	32.5	33.5	34.5	35.4	36.4	37.4
82	28.5	29.5	30.5	31.5	32.5	33.4	34.4	35.4	36.4	37.3
83	28.5	29.5	30.4	31.4	32.4	33.4	34.3	35.3	36.3	37.2
84	28.4	29.4	30.4	31.3	32.3	33.3	34.3	35.2	36.2	37.2
85	28.4	29.3	30.3	31.3	32.2	33.2	34.2	35.1	36.1	37.1
86	28.3	29.3	30.2	31.2	32.2	33.1	34.1	35.1	36.1	37.0
87	28.2	29.2	30.2	31.1	32.1	33.1	34.1	35.0	36.0	37.0
88	28.2	29.1	30.1	31.1	32.0	33.0	34.0	34.9	35.9	36.9
89	28.1	29.1	30.1	31.0	32.0	33.0	33.9	34.9	35.9	36.8
90	28.0	29.0	30.0	30.9	31.9	32.9	33.8	34.8	35.8	36.7
91	28.0	28.9	29.9	30.9	31.8	32.8	33.8	34.7	35.7	36.7
92	27.9	28.9	29.9	30.8	31.8	32.7	33.7	34.7	35.6	36.6
93	27.9	28.8	29.8	30.7	31.7	32.7	33.6	34.6	35.6	36.5
94	27.8	28.7	29.7	30.7	31.6	32.6	33.6	34.5	35.5	36.5
95	27.7	28.7	29.7	30.6	31.6	32.6	33.5	34.5	35.4	36.4
96	27.7	28.6	29.6	30.5	31.5	32.5	33.5	34.4	35.4	36.3
97	27.6	28.6	29.5	30.5	31.5	32.4	33.4	34.3	35.3	36.2
98	27.5	28.5	29.5	30.4	31.4	32.4	33.3	34.3	35.2	36.2
99	27.5	28.4	29.4	30.4	31.3	32.3	33.3	34.2	35.2	36.1
100	27.4	28.4	29.3	30.3	31.3	32.2	33.2	34.1	35.1	36.1
101	27.3	28.3	29.3	30.2	31.2	32.2	33.1	34.1	35.0	36.0
102	27.3	28.2	29.2	30.2	31.1	32.1	33.0	34.0	34.9	35.9
103	27.2	28.2	29.1	30.1	31.0	32.0	32.9	33.9	34.9	35.8
104	27.2	28.1	29.1	30.0	31.0	31.9	32.9	33.8	34.8	35.7
105	27.1	28.0	29.0	30.0	30.9	31.9	32.8	33.8	34.7	35.7
106	27.0	28.0	29.0	29.9	30.9	31.8	32.8	33.7	34.7	35.6
107	27.0	27.9	28.9	29.8	30.8	31.7	32.7	33.6	34.6	35.5
108	26.9	27.9	28.8	29.8	30.7	31.7	32.6	33.6	34.5	35.5
109	26.9	27.8	28.8	29.7	30.7	31.6	32.6	33.5	34.4	35.4
110	26.8	27.7	28.7	29.6	30.6	31.5	32.5	33.4	34.4	35.3
111	26.7	27.7	28.6	29.6	30.5	31.5	32.4	33.4	34.3	35.2
112	26.7	27.6	28.6	29.5	30.5	31.4	32.3	33.3	34.2	35.2
113	26.6	27.5	28.5	29.4	30.4	31.3	32.3	33.2	34.1	35.1
114	26.5	27.5	28.4	29.4	30.3	31.3	32.2	33.1	34.1	35.0
115	26.5	27.4	28.4	29.3	30.3	31.2	32.1	33.1	34.0	34.9
116	26.4	27.4	28.3	29.3	30.2	31.2	32.1	33.0	34.0	34.9
117	26.4	27.3	28.3	29.2	30.1	31.1	32.0	32.9	33.9	34.8
118	26.3	27.3	28.2	29.1	30.1	31.0	31.9	32.9	33.8	34.7
119	26.3	27.2	28.2	29.1	30.0	31.0	31.9	32.8	33.7	34.7
120	26.2	27.1	28.1	29.0	30.0	30.9	31.8	32.7	33.7	34.6
121	26.1	27.1	28.0	28.9	29.9	30.8	31.7	32.7	33.6	34.5
122	26.1	27.0	28.0	28.9	29.8	30.7	31.7	32.6	33.5	34.5
123	26.0	26.9	27.9	28.8	29.8	30.7	31.6	32.5	33.5	34.4
124	25.9	26.9	27.8	28.7	29.7	30.6	31.6	32.5	33.4	34.3
125	25.9	26.8	27.8	28.7	29.6	30.6	31.5	32.4	33.3	34.3
126	25.8	26.8	27.7	28.6	29.6	30.5	31.4	32.3	33.3	34.2
127	25.8	26.7	27.6	28.6	29.5	30.4	31.3	32.3	33.2	34.1
128	25.7	26.6	27.6	28.5	29.4	30.4	31.3	32.2	33.1	34.1
129	25.6	26.6	27.5	28.4	29.4	30.3	31.2	32.1	33.1	34.0





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	30	31	32	33	34	35	36	37	38	39
	Corresponding Degrees A.P.I. at 60°F.									
130	25.6	26.5	27.4	28.4	29.3	30.2	31.2	32.1	33.0	33.9
131	25.5	26.4	27.4	28.3	29.2	30.2	31.1	32.0	32.9	33.9
132	25.5	26.4	27.3	28.3	29.2	30.1	31.0	31.9	32.9	33.8
133	25.4	26.3	27.3	28.2	29.1	30.1	31.0	31.9	32.8	33.7
134	25.3	26.3	27.2	28.1	29.1	30.0	30.9	31.8	32.7	33.6
135	25.3	26.2	27.1	28.1	29.0	29.9	30.8	31.7	32.7	33.6
136	25.2	26.1	27.1	28.0	28.9	29.9	30.8	31.7	32.6	33.5
137	25.2	26.1	27.0	27.9	28.9	29.8	30.7	31.6	32.6	33.5
138	25.1	26.0	27.0	27.9	28.8	29.7	30.6	31.6	32.5	33.4
139	25.0	26.0	26.9	27.8	28.7	29.7	30.6	31.5	32.4	33.3
140	25.0	25.9	26.8	27.7	28.7	29.6	30.5	31.4	32.3	33.2
141	24.9	25.8	26.8	27.7	28.6	29.5	30.4	31.3	32.3	33.2
142	24.9	25.8	26.7	27.6	28.5	29.5	30.4	31.3	32.2	33.1
143	24.8	25.7	26.6	27.6	28.5	29.4	30.3	31.2	32.1	33.0
144	24.7	25.7	26.6	27.5	28.4	29.3	30.2	31.2	32.1	33.0
145	24.7	25.6	26.5	27.4	28.4	29.3	30.2	31.1	32.0	32.9
146	24.6	25.6	26.5	27.4	28.3	29.2	30.1	31.0	32.0	32.9
147	24.6	25.5	26.4	27.3	28.3	29.2	30.1	31.0	31.9	32.8
148	24.5	25.4	26.4	27.3	28.2	29.1	30.0	30.9	31.8	32.7
149	24.5	25.4	26.3	27.2	28.1	29.1	30.0	30.9	31.8	32.7
150	24.4	25.3	26.3	27.2	28.1	29.0	29.9	30.8	31.7	32.6
151	24.4	25.3	26.2	27.1	28.0	28.9	29.8	30.7	31.6	32.5
152	24.3	25.2	26.1	27.0	28.0	28.9	29.8	30.7	31.6	32.5
153	24.3	25.2	26.1	27.0	27.9	28.8	29.7	30.6	31.5	32.4
154	24.2	25.1	26.0	26.9	27.8	28.7	29.6	30.5	31.4	32.3
155	24.1	25.0	25.9	26.9	27.8	28.7	29.6	30.5	31.4	32.3
156	24.1	25.0	25.9	26.8	27.7	28.6	29.5	30.4	31.3	32.2
157	24.0	24.9	25.8	26.7	27.6	28.5	29.4	30.3	31.2	32.1
158	23.9	24.8	25.8	26.7	27.6	28.5	29.4	30.3	31.2	32.1
159	23.9	24.8	25.7	26.6	27.5	28.4	29.3	30.2	31.1	32.0
160	23.8	24.7	25.6	26.5	27.4	28.4	29.3	30.2	31.1	31.9
161	23.8	24.7	25.6	26.5	27.4	28.3	29.2	30.1	31.0	31.9
162	23.7	24.6	25.5	26.4	27.3	28.2	29.1	30.0	30.9	31.8
163	23.7	24.6	25.5	26.4	27.3	28.2	29.1	30.0	30.9	31.7
164	23.6	24.5	25.4	26.3	27.2	28.1	29.0	29.9	30.8	31.7
165	23.5	24.4	25.3	26.2	27.1	28.0	28.9	29.8	30.7	31.6
166	23.5	24.4	25.3	26.2	27.1	28.0	28.9	29.8	30.7	31.6
167	23.4	24.3	25.2	26.1	27.0	27.9	28.8	29.7	30.6	31.5
168	23.4	24.3	25.2	26.1	27.0	27.9	28.7	29.6	30.5	31.4
169	23.3	24.2	25.1	26.0	26.9	27.8	28.7	29.6	30.5	31.3
170	23.2	24.1	25.0	25.9	26.8	27.7	28.6	29.5	30.4	31.3
171	23.2	24.1	25.0	25.9	26.8	27.7	28.6	29.5	30.4	31.2
172	23.1	24.0	24.9	25.8	26.7	27.6	28.5	29.4	30.3	31.2
173	23.1	24.0	24.9	25.8	26.7	27.6	28.5	29.3	30.2	31.1
174	23.0	23.9	24.8	25.7	26.6	27.5	28.4	29.3	30.2	31.0
175	22.9	23.8	24.7	25.6	26.5	27.4	28.3	29.2	30.1	31.0
176	22.9	23.8	24.7	25.6	26.5	27.4	28.3	29.1	30.0	30.9
177	22.8	23.7	24.6	25.5	26.4	27.3	28.2	29.1	30.0	30.9
178	22.8	23.7	24.6	25.5	26.4	27.3	28.1	29.0	29.9	30.8
179	22.7	23.6	24.5	25.4	26.3	27.2	28.1	29.0	29.9	30.7
180	22.7	23.6	24.5	25.3	26.2	27.1	28.0	28.9	29.8	30.7
181	22.6	23.5	24.4	25.3	26.2	27.1	28.0	28.8	29.7	30.6
182	22.6	23.5	24.4	25.2	26.1	27.0	27.9	28.8	29.7	30.5
183	22.5	23.4	24.3	25.2	26.1	27.0	27.8	28.7	29.6	30.5
184	22.5	23.4	24.3	25.1	26.0	26.9	27.8	28.6	29.5	30.4
185	22.4	23.3	24.2	25.1	25.9	26.8	27.7	28.6	29.5	30.3
186	22.3	23.2	24.1	25.0	25.9	26.8	27.6	28.5	29.4	30.3
187	22.3	23.2	24.1	25.0	25.8	26.7	27.6	28.5	29.3	30.2
188	22.2	23.1	24.0	24.9	25.8	26.6	27.5	28.4	29.3	30.1
189	22.2	23.1	24.0	24.8	25.7	26.6	27.5	28.3	29.2	30.1
190	22.1	23.0	23.9	24.8	25.7	26.5	27.4	28.3	29.1	30.0
191	22.1	22.9	23.8	24.7	25.6	26.5	27.3	28.2	29.1	30.0
192	22.0	22.9	23.8	24.7	25.5	26.4	27.3	28.2	29.0	29.9
193	21.9	22.8	23.7	24.6	25.5	26.4	27.2	28.1	29.0	29.8
194	21.9	22.8	23.7	24.5	25.4	26.3	27.2	28.0	28.9	29.8
195	21.8	22.7	23.6	24.5	25.4	26.3	27.1	28.0	28.9	29.7





Observed Tempera- ture in °F.	Observed Degrees A.P.I.									
	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°
	Corresponding Degrees A.P.I. at 60°F.									
0	45.1	46.2	47.3	48.4	49.5	50.7	51.8	52.9	54.1	55.2
1	45.0	46.1	47.2	48.3	49.4	50.6	51.7	52.8	54.0	55.1
2	44.9	46.0	47.1	48.2	49.3	50.5	51.6	52.7	53.8	55.0
3	44.8	45.9	47.0	48.1	49.2	50.4	51.5	52.6	53.7	54.9
4	44.7	45.8	46.9	48.0	49.1	50.3	51.4	52.5	53.6	54.7
5	44.6	45.7	46.8	47.9	49.0	50.1	51.3	52.4	53.5	54.6
6	44.5	45.6	46.7	47.8	48.9	50.0	51.2	52.3	53.4	54.5
7	44.4	45.5	46.6	47.7	48.8	49.9	51.1	52.2	53.3	54.4
8	44.3	45.4	46.5	47.6	48.7	49.8	51.0	52.1	53.2	54.3
9	44.2	45.3	46.4	47.5	48.6	49.7	50.9	52.0	53.1	54.2
10	44.1	45.2	46.3	47.4	48.5	49.6	50.8	51.9	53.0	54.1
11	44.0	45.1	46.2	47.3	48.4	49.5	50.7	51.8	52.9	54.0
12	43.9	45.0	46.1	47.2	48.3	49.4	50.5	51.6	52.8	53.9
13	43.9	45.0	46.1	47.1	48.2	49.3	50.4	51.5	52.6	53.7
14	43.8	44.9	46.0	47.0	48.1	49.2	50.3	51.4	52.5	53.6
15	43.7	44.8	45.9	46.9	48.0	49.1	50.2	51.3	52.4	53.5
16	43.6	44.7	45.8	46.8	47.9	49.0	50.1	51.2	52.3	53.4
17	43.5	44.6	45.7	46.8	47.8	48.9	50.0	51.1	52.2	53.3
18	43.4	44.5	45.6	46.7	47.7	48.8	49.9	51.0	52.1	53.2
19	43.4	44.4	45.5	46.6	47.7	48.7	49.8	50.9	52.0	53.1
20	43.3	44.3	45.4	46.5	47.6	48.7	49.7	50.8	51.9	53.0
21	43.2	44.3	45.3	46.4	47.5	48.6	49.6	50.7	51.8	52.9
22	43.1	44.2	45.2	46.3	47.4	48.5	49.5	50.6	51.7	52.8
23	43.0	44.1	45.2	46.2	47.3	48.4	49.4	50.5	51.6	52.7
24	42.9	44.0	45.1	46.1	47.2	48.3	49.3	50.4	51.5	52.6
25	42.8	43.9	45.0	46.0	47.1	48.2	49.2	50.3	51.4	52.5
26	42.8	43.8	44.9	45.9	47.0	48.1	49.1	50.2	51.3	52.4
27	42.7	43.7	44.8	45.9	46.9	48.0	49.0	50.1	51.2	52.3
28	42.6	43.6	44.7	45.8	46.8	47.9	49.0	50.0	51.1	52.2
29	42.5	43.6	44.6	45.7	46.7	47.8	48.9	49.9	51.0	52.1
30	42.4	43.5	44.5	45.6	46.6	47.7	48.8	49.8	50.9	52.0
31	42.4	43.4	44.5	45.5	46.6	47.6	48.7	49.7	50.8	51.9
32	42.3	43.3	44.4	45.4	46.5	47.5	48.6	49.6	50.7	51.7
33	42.2	43.2	44.3	45.3	46.4	47.4	48.5	49.5	50.6	51.6
34	42.1	43.1	44.2	45.2	46.3	47.3	48.4	49.4	50.5	51.5
35	42.0	43.1	44.1	45.2	46.2	47.2	48.3	49.3	50.4	51.4
36	41.9	43.0	44.0	45.1	46.1	47.2	48.2	49.2	50.3	51.3
37	41.8	42.9	43.9	45.0	46.0	47.1	48.1	49.1	50.2	51.2
38	41.8	42.8	43.9	44.9	45.9	47.0	48.0	49.0	50.1	51.1
39	41.7	42.7	43.8	44.8	45.8	46.9	47.9	49.0	50.0	51.0
40	41.6	42.6	43.7	44.7	45.7	46.8	47.8	48.9	49.9	50.9
41	41.5	42.5	43.6	44.6	45.6	46.7	47.7	48.8	49.8	50.8
42	41.4	42.5	43.5	44.5	45.6	46.6	47.6	48.7	49.7	50.8
43	41.3	42.4	43.4	44.4	45.5	46.5	47.5	48.6	49.6	50.7
44	41.3	42.3	43.3	44.4	45.4	46.4	47.5	48.5	49.5	50.6
45	41.2	42.2	43.3	44.3	45.3	46.3	47.4	48.4	49.4	50.5
46	41.1	42.1	43.2	44.2	45.2	46.2	47.3	48.3	49.3	50.4
47	41.0	42.0	43.1	44.1	45.1	46.1	47.2	48.2	49.2	50.3
48	41.0	42.0	43.0	44.0	45.0	46.1	47.1	48.1	49.1	50.2
49	40.9	41.9	42.9	43.9	44.9	46.0	47.0	48.0	49.0	50.1



Observed Temperature in °F	Observed Degrees A.P.I.									
	40°	41°	42°	43°	44°	45°	46°	47°	48°	49°
	Corresponding Degrees A.P.I. at 60°F.									
50	40.8	41.8	42.8	43.8	44.8	45.9	46.9	47.9	48.9	50.0
51	40.7	41.7	42.7	43.7	44.7	45.8	46.8	47.8	48.8	49.9
52	40.6	41.6	42.7	43.7	44.7	45.7	46.7	47.7	48.7	49.8
53	40.6	41.6	42.6	43.6	44.6	45.6	46.6	47.6	48.6	49.7
54	40.5	41.5	42.5	43.5	44.5	45.5	46.5	47.5	48.5	49.6
55	40.4	41.4	42.4	43.4	44.4	45.4	46.4	47.5	48.5	49.5
56	40.3	41.3	42.3	43.3	44.3	45.4	46.4	47.4	48.4	49.4
57	40.2	41.2	42.3	43.3	44.3	45.3	46.3	47.3	48.3	49.3
58	40.2	41.2	42.2	43.2	44.2	45.2	46.2	47.2	48.2	49.2
59	40.1	41.1	42.1	43.1	44.1	45.1	46.1	47.1	48.1	49.1
60	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
61	39.9	40.9	41.9	42.9	43.9	44.9	45.9	46.9	47.9	48.9
62	39.8	40.8	41.9	42.8	43.8	44.8	45.8	46.8	47.8	48.8
63	39.8	40.8	41.8	42.8	43.7	44.7	45.7	46.7	47.7	48.7
64	39.7	40.7	41.7	42.7	43.7	44.6	45.6	46.6	47.6	48.6
65	39.6	40.6	41.6	42.6	43.6	44.6	45.6	46.6	47.5	48.5
66	39.5	40.5	41.5	42.5	43.5	44.5	45.5	46.5	47.5	48.4
67	39.5	40.5	41.5	42.4	43.4	44.4	45.4	46.4	47.4	48.3
68	39.4	40.4	41.4	42.3	43.3	44.3	45.3	46.3	47.3	48.2
69	39.3	40.3	41.3	42.2	43.2	44.2	45.2	46.2	47.2	48.2
70	39.2	40.2	41.2	42.2	43.2	44.1	45.1	46.1	47.1	48.1
71	39.2	40.1	41.1	42.1	43.1	44.1	45.0	46.0	47.0	48.0
72	39.1	40.1	41.1	42.0	43.0	44.0	45.0	45.9	46.9	47.9
73	39.0	40.0	41.0	41.9	42.9	43.9	44.9	45.8	46.8	47.8
74	38.9	39.9	40.9	41.8	42.8	43.8	44.8	45.7	46.7	47.7
75	38.8	39.8	40.8	41.8	42.7	43.7	44.7	45.7	46.6	47.6
76	38.8	39.7	40.7	41.7	42.7	43.6	44.6	45.6	46.6	47.5
77	38.7	39.7	40.7	41.6	42.6	43.6	44.5	45.5	46.5	47.5
78	38.6	39.6	40.6	41.5	42.5	43.5	44.4	45.4	46.4	47.4
79	38.5	39.5	40.5	41.4	42.4	43.4	44.4	45.3	46.3	47.3
80	38.4	39.4	40.4	41.3	42.3	43.3	44.3	45.2	46.2	47.2
81	38.4	39.3	40.3	41.3	42.2	43.2	44.2	45.1	46.1	47.1
82	38.3	39.3	40.3	41.2	42.2	43.1	44.1	45.1	46.0	47.0
83	38.2	39.2	40.2	41.1	42.1	43.1	44.0	45.0	46.0	46.9
84	38.1	39.1	40.1	41.0	42.0	43.0	43.9	44.9	45.9	46.8
85	38.1	39.0	40.0	41.0	41.9	42.9	43.8	44.8	45.8	46.7
86	38.0	38.9	39.9	40.9	41.8	42.8	43.7	44.7	45.7	46.6
87	37.9	38.9	39.9	40.8	41.8	42.7	43.7	44.6	45.6	46.6
88	37.9	38.8	39.8	40.7	41.7	42.6	43.6	44.5	45.5	46.5
89	37.8	38.7	39.7	40.6	41.6	42.5	43.5	44.5	45.4	46.4
90	37.7	38.7	39.6	40.6	41.5	42.5	43.4	44.4	45.4	46.3
91	37.6	38.6	39.5	40.5	41.4	42.4	43.3	44.3	45.3	46.2
92	37.6	38.5	39.5	40.4	41.4	42.3	43.3	44.2	45.2	46.1
93	37.5	38.4	39.4	40.3	41.3	42.2	43.2	44.1	45.1	46.0
94	37.4	38.4	39.3	40.3	41.2	42.2	43.1	44.1	45.0	46.0
95	37.3	38.3	39.2	40.2	41.1	42.1	43.0	44.0	44.9	45.9
96	37.3	38.2	39.2	40.1	41.1	42.0	43.0	43.9	44.8	45.8
97	37.2	38.2	39.1	40.1	41.0	41.9	42.9	43.8	44.8	45.7
98	37.1	38.1	39.0	40.0	40.9	41.9	42.8	43.7	44.7	45.6
99	37.1	38.0	39.0	39.9	40.8	41.8	42.7	43.7	44.6	45.6





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	40	41	42	43	44	45	46	47	48	49
	Corresponding Degrees A.P.I. at 60°F.									
100	37.0	37.9	38.9	39.8	40.7	41.7	42.6	43.6	44.5	45.5
101	36.9	37.9	38.8	39.7	40.7	41.6	42.5	43.5	44.4	45.4
102	36.8	37.8	38.7	39.7	40.6	41.5	42.5	43.4	44.3	45.3
103	36.7	37.7	38.6	39.6	40.5	41.5	42.4	43.3	44.3	45.2
104	36.7	37.6	38.6	39.5	40.4	41.4	42.3	43.3	44.2	45.1
105	36.6	37.6	38.5	39.4	40.4	41.3	42.2	43.2	44.1	45.0
106	36.5	37.5	38.4	39.3	40.3	41.2	42.1	43.1	44.0	44.9
107	36.5	37.4	38.4	39.3	40.2	41.2	42.1	43.0	43.9	44.8
108	36.4	37.3	38.3	39.2	40.1	41.1	42.0	42.9	43.8	44.8
109	36.3	37.3	38.2	39.1	40.1	41.0	41.9	42.8	43.7	44.7
110	36.2	37.2	38.1	39.0	40.0	40.9	41.8	42.8	43.7	44.6
111	36.2	37.1	38.1	39.0	39.9	40.8	41.8	42.7	43.6	44.5
112	36.1	37.0	38.0	38.9	39.8	40.8	41.7	42.6	43.5	44.4
113	36.0	36.9	37.9	38.8	39.7	40.7	41.6	42.5	43.4	44.4
114	36.0	36.9	37.8	38.8	39.7	40.6	41.5	42.4	43.3	44.3
115	35.9	36.8	37.8	38.7	39.6	40.5	41.4	42.4	43.3	44.2
116	35.8	36.7	37.7	38.6	39.5	40.4	41.3	42.3	43.2	44.1
117	35.7	36.7	37.6	38.5	39.4	40.4	41.3	42.2	43.1	44.0
118	35.7	36.6	37.5	38.4	39.4	40.3	41.2	42.1	43.0	44.0
119	35.6	36.5	37.5	38.4	39.3	40.2	41.1	42.1	43.0	43.9
120	35.5	36.5	37.4	38.3	39.2	40.2	41.1	42.0	42.9	43.8
121	35.5	36.4	37.3	38.2	39.1	40.1	41.0	41.9	42.8	43.7
122	35.4	36.3	37.2	38.1	39.1	40.0	40.9	41.8	42.7	43.6
123	35.3	36.2	37.2	38.1	39.0	39.9	40.8	41.7	42.6	43.6
124	35.3	36.2	37.1	38.0	38.9	39.8	40.7	41.6	42.5	43.5
125	35.2	36.1	37.0	37.9	38.9	39.8	40.7	41.6	42.5	43.4
126	35.1	36.0	37.0	37.9	38.8	39.7	40.6	41.5	42.4	43.3
127	35.1	36.0	36.9	37.8	38.7	39.6	40.5	41.4	42.3	43.3
128	35.0	35.9	36.8	37.7	38.6	39.6	40.5	41.4	42.3	43.2
129	34.9	35.8	36.7	37.7	38.6	39.5	40.4	41.3	42.2	43.1
130	34.8	35.8	36.7	37.6	38.5	39.4	40.3	41.2	42.1	43.0
131	34.8	35.7	36.6	37.5	38.4	39.3	40.2	41.1	42.0	42.9
132	34.7	35.6	36.5	37.4	38.4	39.3	40.2	41.1	42.0	42.9
133	34.6	35.6	36.5	37.4	38.3	39.2	40.1	41.0	41.9	42.8
134	34.6	35.5	36.4	37.3	38.2	39.1	40.0	40.9	41.8	42.7
135	34.5	35.4	36.3	37.2	38.1	39.0	39.9	40.8	41.7	42.6
136	34.5	35.4	36.3	37.2	38.1	39.0	39.9	40.7	41.6	42.5
137	34.4	35.3	36.2	37.1	38.0	38.9	39.8	40.7	41.5	42.4
138	34.3	35.2	36.1	37.0	37.9	38.8	39.7	40.6	41.5	42.4
139	34.2	35.1	36.0	36.9	37.8	38.7	39.6	40.5	41.4	42.3
140	34.2	35.1	36.0	36.9	37.8	38.7	39.5	40.4	41.3	42.2
141	34.1	35.0	35.9	36.8	37.7	38.6	39.5	40.4	41.2	42.1
142	34.0	34.9	35.8	36.7	37.6	38.5	39.4	40.3	41.2	42.1
143	34.0	34.9	35.8	36.6	37.5	38.4	39.3	40.2	41.1	42.0
144	33.9	34.8	35.7	36.6	37.5	38.3	39.2	40.1	41.0	41.9
145	33.8	34.7	35.6	36.5	37.4	38.3	39.2	40.1	40.9	41.8
146	33.8	34.7	35.6	36.4	37.3	38.2	39.1	40.0	40.9	41.8
147	33.7	34.6	35.5	36.3	37.2	38.1	39.0	39.9	40.8	41.7
148	33.6	34.5	35.4	36.3	37.2	38.1	39.0	39.8	40.7	41.6
149	33.6	34.5	35.4	36.2	37.1	38.0	38.9	39.8	40.6	41.5
150	33.5	34.4	35.3	36.1	37.0	37.9	38.8	39.7	40.6	41.5





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	50	51	52	53	54	55	56	57	58	59
	Corresponding Degrees A.P.I. at 60°F.									
0	56.3	57.5	58.6	59.7	60.8	61.9	63.1	64.2	65.3	66.4
1	56.2	57.4	58.5	59.6	60.7	61.8	62.9	64.0	65.2	66.3
2	56.1	57.2	58.4	59.5	60.6	61.7	62.8	63.9	65.0	66.2
3	56.0	57.1	58.2	59.3	60.4	61.5	62.6	63.8	64.9	66.0
4	55.8	57.0	58.1	59.2	60.3	61.4	62.5	63.6	64.8	65.9
5	55.7	56.9	58.0	59.1	60.2	61.3	62.4	63.5	64.6	65.8
6	55.6	56.8	57.9	59.0	60.1	61.2	62.3	63.4	64.5	65.6
7	55.5	56.6	57.7	58.8	59.9	61.0	62.2	63.3	64.4	65.5
8	55.4	56.5	57.6	58.7	59.8	60.9	62.0	63.1	64.2	65.4
9	55.3	56.4	57.5	58.6	59.7	60.8	61.9	63.0	64.1	65.2
10	55.2	56.3	57.4	58.5	59.6	60.7	61.8	62.9	64.0	65.1
11	55.1	56.2	57.3	58.4	59.5	60.6	61.7	62.8	63.9	65.0
12	55.0	56.1	57.2	58.3	59.4	60.4	61.5	62.6	63.7	64.8
13	54.8	55.9	57.0	58.1	59.2	60.3	61.4	62.5	63.6	64.7
14	54.7	55.8	56.9	58.0	59.1	60.2	61.3	62.4	63.5	64.6
15	54.6	55.7	56.8	57.9	59.0	60.1	61.2	62.3	63.4	64.4
16	54.5	55.6	56.7	57.8	58.9	59.9	61.0	62.1	63.2	64.3
17	54.4	55.5	56.6	57.6	58.7	59.8	60.9	62.0	63.1	64.2
18	54.3	55.4	56.5	57.5	58.6	59.7	60.8	61.9	63.0	64.0
19	54.2	55.3	56.3	57.4	58.5	59.6	60.7	61.8	62.8	63.9
20	54.1	55.2	56.2	57.3	58.4	59.5	60.5	61.6	62.7	63.8
21	54.0	55.1	56.1	57.2	58.3	59.4	60.4	61.5	62.6	63.7
22	53.9	54.9	56.0	57.1	58.2	59.2	60.3	61.4	62.5	63.5
23	53.8	54.8	55.9	57.0	58.0	59.1	60.2	61.3	62.4	63.4
24	53.6	54.7	55.8	56.9	57.9	59.0	60.1	61.2	62.2	63.3
25	53.5	54.6	55.7	56.8	57.8	58.9	60.0	61.0	62.1	63.2
26	53.4	54.5	55.6	56.6	57.7	58.8	59.8	60.9	62.0	63.0
27	53.3	54.4	55.5	56.5	57.6	58.7	59.7	60.8	61.9	62.9
28	53.2	54.3	55.4	56.4	57.5	58.5	59.6	60.7	61.8	62.8
29	53.1	54.2	55.3	56.3	57.4	58.4	59.5	60.5	61.6	62.6
30	53.0	54.1	55.1	56.2	57.2	58.3	59.4	60.4	61.5	62.5
31	52.9	54.0	55.0	56.1	57.1	58.2	59.3	60.3	61.4	62.4
32	52.8	53.9	54.9	56.0	57.0	58.1	59.2	60.2	61.3	62.3
33	52.7	53.8	54.8	55.9	56.9	58.0	59.0	60.1	61.2	62.2
34	52.6	53.7	54.7	55.8	56.8	57.8	58.9	59.9	61.0	62.0
35	52.5	53.5	54.6	55.6	56.7	57.7	58.8	59.8	60.9	61.9
36	52.4	53.4	54.5	55.5	56.6	57.6	58.7	59.7	60.8	61.8
37	52.3	53.3	54.4	55.4	56.5	57.5	58.6	59.6	60.7	61.7
38	52.2	53.2	54.3	55.3	56.4	57.4	58.4	59.5	60.5	61.6
39	52.1	53.1	54.2	55.2	56.2	57.3	58.3	59.4	60.4	61.5
40	52.0	53.0	54.1	55.1	56.1	57.2	58.2	59.2	60.3	61.3
41	51.9	52.9	54.0	55.0	56.0	57.1	58.1	59.1	60.2	61.2
42	51.8	52.8	53.8	54.9	55.9	56.9	58.0	59.0	60.1	61.1
43	51.7	52.7	53.7	54.8	55.8	56.8	57.9	58.9	59.9	61.0
44	51.6	52.6	53.6	54.7	55.7	56.7	57.8	58.8	59.8	60.9
45	51.5	52.5	53.5	54.6	55.6	56.6	57.6	58.7	59.7	60.7
46	51.4	52.4	53.4	54.5	55.5	56.5	57.5	58.6	59.6	60.6
47	51.3	52.3	53.3	54.3	55.4	56.4	57.4	58.4	59.5	60.5
48	51.2	52.2	53.2	54.2	55.3	56.3	57.3	58.3	59.3	60.4
49	51.1	52.1	53.1	54.1	55.2	56.2	57.2	58.2	59.2	60.3
50	51.0	52.0	53.0	54.0	55.1	56.1	57.1	58.1	59.1	60.2
51	50.9	51.9	52.9	53.9	55.0	56.0	57.0	58.0	59.0	60.1
52	50.8	51.8	52.8	53.8	54.9	55.9	56.9	57.9	58.9	59.9
53	50.7	51.7	52.7	53.7	54.7	55.7	56.7	57.8	58.8	59.8
54	50.6	51.6	52.6	53.6	54.6	55.6	56.6	57.6	58.6	59.7
55	50.5	51.5	52.5	53.5	54.5	55.5	56.5	57.5	58.5	59.6
56	50.4	51.4	52.4	53.4	54.4	55.4	56.4	57.4	58.4	59.4
57	50.3	51.3	52.3	53.3	54.3	55.3	56.3	57.3	58.3	59.3
58	50.2	51.2	52.2	53.2	54.2	55.2	56.2	57.2	58.2	59.2
59	50.1	51.1	52.1	53.1	54.1	55.1	56.1	57.1	58.1	59.1
60	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
61	49.9	50.9	51.9	52.9	53.9	54.9	55.9	56.9	57.9	58.9
62	49.8	50.8	51.8	52.8	53.8	54.8	55.8	56.8	57.8	58.8
63	49.7	50.7	51.7	52.7	53.7	54.7	55.7	56.6	57.6	58.6
64	49.6	50.6	51.6	52.6	53.6	54.6	55.6	56.5	57.5	58.5





Observed Temperature in °F.	Observed Degrees A.P.I.									
	50	51	52	53	54	55	56	57	58	59
	Corresponding Degrees A.P.I. at 60°F.									
65	49.5	50.5	51.5	52.5	53.5	54.5	55.4	56.4	57.4	58.4
66	49.4	50.4	51.4	52.4	53.4	54.4	55.3	56.3	57.3	58.3
67	49.3	50.3	51.3	52.3	53.3	54.3	55.2	56.2	57.2	58.2
68	49.2	50.2	51.2	52.2	53.2	54.2	55.1	56.1	57.1	58.1
69	49.1	50.1	51.1	52.1	53.1	54.1	55.0	56.0	57.0	58.0
70	49.0	50.0	51.0	52.0	53.0	54.0	54.9	55.9	56.9	57.9
71	49.0	50.0	50.9	51.9	52.9	53.9	54.8	55.8	56.8	57.8
72	48.9	49.9	50.8	51.8	52.8	53.8	54.7	55.7	56.7	57.7
73	48.8	49.8	50.7	51.7	52.7	53.7	54.6	55.6	56.6	57.6
74	48.7	49.7	50.6	51.6	52.6	53.6	54.5	55.5	56.5	57.4
75	48.6	49.6	50.5	51.5	52.5	53.5	54.4	55.4	56.4	57.3
76	48.5	49.5	50.4	51.4	52.4	53.4	54.3	55.3	56.3	57.2
77	48.4	49.4	50.4	51.3	52.3	53.3	54.2	55.2	56.1	57.1
78	48.3	49.3	50.3	51.2	52.2	53.2	54.1	55.1	56.0	57.0
79	48.2	49.2	50.2	51.1	52.1	53.1	54.0	55.0	55.9	56.9
80	48.1	49.1	50.1	51.0	52.0	53.0	53.9	54.9	55.8	56.8
81	48.0	49.0	50.0	50.9	51.9	52.9	53.8	54.8	55.7	56.7
82	48.0	48.9	49.9	50.8	51.8	52.8	53.7	54.7	55.6	56.6
83	47.9	48.8	49.8	50.8	51.7	52.7	53.6	54.6	55.5	56.5
84	47.8	48.8	49.7	50.7	51.6	52.6	53.5	54.5	55.4	56.4
85	47.7	48.7	49.6	50.6	51.5	52.5	53.4	54.4	55.3	56.3
86	47.6	48.6	49.5	50.5	51.4	52.4	53.3	54.2	55.2	56.1
87	47.5	48.5	49.4	50.4	51.3	52.3	53.2	54.1	55.1	56.0
88	47.4	48.4	49.3	50.3	51.2	52.2	53.1	54.0	55.0	55.9
89	47.3	48.3	49.2	50.2	51.1	52.1	53.0	53.9	54.9	55.8
90	47.2	48.2	49.1	50.1	51.0	52.0	52.9	53.8	54.8	55.7
91	47.2	48.1	49.0	50.0	50.9	51.9	52.8	53.7	54.7	55.6
92	47.1	48.0	48.9	49.9	50.8	51.8	52.7	53.6	54.6	55.5
93	47.0	47.9	48.8	49.8	50.7	51.7	52.6	53.5	54.5	55.4
94	46.9	47.8	48.8	49.7	50.7	51.6	52.5	53.4	54.4	55.3
95	46.8	47.8	48.7	49.6	50.6	51.5	52.4	53.3	54.3	55.2
96	46.7	47.7	48.6	49.5	50.5	51.4	52.3	53.2	54.2	55.1
97	46.6	47.6	48.5	49.4	50.4	51.3	52.2	53.1	54.1	55.0
98	46.6	47.5	48.4	49.4	50.3	51.2	52.1	53.0	54.0	54.9
99	46.5	47.4	48.3	49.3	50.2	51.1	52.0	52.9	53.9	54.8
100	46.4	47.3	48.2	49.2	50.1	51.0	51.9	52.8	53.8	54.7
101	46.3	47.2	48.1	49.1	50.0	50.9	51.8	52.7	53.7	54.6
102	46.2	47.1	48.0	49.0	49.9	50.8	51.7	52.6	53.6	54.5
103	46.1	47.0	48.0	48.9	49.8	50.7	51.6	52.5	53.5	54.4
104	46.0	47.0	47.9	48.8	49.7	50.6	51.5	52.4	53.4	54.3
105	46.0	46.9	47.8	48.7	49.6	50.5	51.4	52.3	53.3	54.2
106	45.9	46.8	47.7	48.6	49.5	50.4	51.3	52.2	53.2	54.1
107	45.8	46.7	47.6	48.5	49.4	50.4	51.3	52.2	53.1	54.0
108	45.7	46.6	47.5	48.4	49.3	50.3	51.2	52.1	53.0	53.9
109	45.6	46.5	47.4	48.3	49.2	50.2	51.1	52.0	52.9	53.8
110	45.5	46.4	47.3	48.2	49.2	50.1	50.0	51.9	52.8	53.7
111	45.4	46.4	47.3	48.2	49.1	50.0	50.9	51.8	52.7	53.6
112	45.4	46.3	47.2	48.1	49.0	49.9	50.8	51.7	52.6	53.5
113	45.3	46.2	47.1	48.0	48.9	49.8	50.7	51.6	52.5	53.4
114	45.2	46.1	47.0	47.9	48.8	49.7	50.6	51.5	52.4	53.3
115	45.1	46.0	46.9	47.8	48.7	49.6	50.5	51.4	52.3	53.2
116	45.0	45.9	46.8	47.7	48.6	49.5	50.4	51.3	52.2	53.1
117	45.0	45.8	46.7	47.6	48.5	49.4	50.3	51.2	52.1	53.0
118	44.9	45.8	46.7	47.6	48.5	49.4	50.2	51.1	52.0	52.9
119	44.8	45.7	46.6	47.5	48.4	49.3	50.1	51.0	51.9	52.8
120	44.7	45.6	46.5	47.4	48.3	49.2	50.0	50.9	51.8	52.7
121	44.6	45.5	46.4	47.3	48.2	49.1	50.0	50.8	51.7	52.6
122	44.5	45.4	46.3	47.2	48.1	49.0	49.9	50.8	51.6	52.5
123	44.5	45.4	46.2	47.1	48.0	48.9	49.8	50.7	51.6	52.4
124	44.4	45.3	46.2	47.0	47.9	48.8	49.7	50.6	51.5	52.3
125	44.3	45.2	46.1	47.0	47.9	48.7	49.6	50.5	51.4	52.2





Observed Temperature in °F	Observed Degrees A.P.I.										15.
	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	
	Corresponding Degrees A.P.I. at 60°F										
0	67.6	68.7	69.8	70.9	72.0	73.2	74.3	75.5	76.6	77.7	
1	67.4	68.5	69.7	70.8	71.9	73.0	74.1	75.3	76.4	77.6	
2	67.3	68.4	69.5	70.6	71.7	72.9	74.0	75.2	76.3	77.4	
3	67.1	68.2	69.4	70.5	71.6	72.7	73.8	75.0	76.1	77.3	
4	67.0	68.1	69.2	70.4	71.5	72.6	73.7	74.9	76.0	77.1	
5	66.9	68.0	69.1	70.2	71.3	72.4	73.5	74.7	75.8	77.0	
6	66.7	67.9	69.0	70.1	71.2	72.3	73.4	74.6	75.7	76.8	
7	66.6	67.7	68.8	70.0	71.0	72.2	73.3	74.4	75.5	76.6	
8	66.5	67.6	68.7	69.8	70.9	72.0	73.1	74.3	75.4	76.5	
9	66.3	67.4	68.6	69.7	70.8	71.9	73.0	74.1	75.2	76.3	
10	66.2	67.3	68.4	69.5	70.6	71.7	72.8	74.0	75.1	76.2	
11	66.0	67.2	68.3	69.4	70.5	71.6	72.7	73.8	74.9	76.0	
12	65.9	67.0	68.1	69.2	70.3	71.4	72.5	73.7	74.8	75.9	
13	65.8	66.9	68.0	69.1	70.2	71.3	72.4	73.5	74.6	75.7	
14	65.7	66.8	67.9	69.0	70.1	71.2	72.3	73.4	74.5	75.6	
15	65.5	66.6	67.7	68.8	69.9	71.0	72.1	73.2	74.3	75.4	
16	65.4	66.5	67.6	68.7	69.8	70.9	72.0	73.1	74.2	75.3	
17	65.3	66.4	67.5	68.6	69.7	70.8	71.8	72.9	74.0	75.1	
18	65.1	66.2	67.3	68.4	69.5	70.6	71.7	72.8	73.9	75.0	
19	65.0	66.1	67.2	68.3	69.4	70.5	71.5	72.6	73.7	74.8	
20	64.9	66.0	67.1	68.2	69.2	70.3	71.4	72.5	73.6	74.7	
21	64.8	65.8	66.9	68.0	69.1	70.2	71.3	72.4	73.4	74.5	
22	64.6	65.7	66.8	67.9	69.0	70.0	71.1	72.2	73.3	74.4	
23	64.5	65.6	66.7	67.7	68.8	69.9	71.0	72.1	73.1	74.2	
24	64.4	65.4	66.5	67.6	68.7	69.8	70.8	71.9	73.0	74.1	
25	64.2	65.3	66.4	67.5	68.5	69.6	70.7	71.8	72.8	73.9	
26	64.1	65.2	66.3	67.3	68.4	69.5	70.6	71.6	72.7	73.8	
27	64.0	65.1	66.1	67.2	68.3	69.4	70.4	71.5	72.5	73.6	
28	63.9	64.9	66.0	67.1	68.1	69.2	70.3	71.3	72.4	73.5	
29	63.7	64.8	65.8	66.9	68.0	69.1	70.1	71.2	72.2	73.3	
30	63.6	64.7	65.7	66.8	67.9	68.9	70.0	71.0	72.1	73.2	
31	63.5	64.5	65.6	66.6	67.7	68.8	69.8	70.9	72.0	73.0	
32	63.4	64.4	65.5	66.5	67.6	68.7	69.7	70.8	71.8	72.9	
33	63.2	64.3	65.4	66.4	67.5	68.5	69.6	70.6	71.7	72.8	
34	63.1	64.2	65.2	66.3	67.3	68.4	69.4	70.5	71.5	72.6	
35	63.0	64.0	65.1	66.1	67.2	68.2	69.3	70.3	71.4	72.4	
36	62.9	63.9	65.0	66.0	67.0	68.1	69.1	70.2	71.2	72.3	
37	62.8	63.8	64.8	65.9	66.9	68.0	69.0	70.1	71.1	72.2	
38	62.6	63.6	64.7	65.7	66.8	67.8	68.9	69.9	71.0	72.0	
39	62.5	63.5	64.6	65.6	66.7	67.7	68.7	69.8	70.8	71.9	
40	62.4	63.4	64.4	65.5	66.5	67.6	68.6	69.7	70.7	71.8	
41	62.3	63.3	64.3	65.4	66.4	67.5	68.5	69.6	70.6	71.6	
42	62.1	63.2	64.2	65.2	66.3	67.3	68.3	69.4	70.4	71.5	
43	62.0	63.1	64.1	65.1	66.2	67.2	68.2	69.3	70.3	71.3	
44	61.9	62.9	64.0	65.0	66.0	67.1	68.1	69.2	70.2	71.2	
45	61.8	62.8	63.8	64.9	65.9	66.9	67.9	69.0	70.0	71.0	
46	61.6	62.6	63.7	64.7	65.7	66.8	67.8	68.9	69.9	70.9	
47	61.5	62.5	63.6	64.6	65.6	66.6	67.7	68.7	69.7	70.8	
48	61.4	62.4	63.4	64.5	65.5	66.5	67.5	68.6	69.6	70.6	
49	61.3	62.3	63.3	64.3	65.4	66.4	67.4	68.4	69.4	70.5	
50	61.2	62.2	63.2	64.2	65.3	66.3	67.3	68.3	69.3	70.4	
51	61.1	62.1	63.1	64.1	65.1	66.2	67.2	68.2	69.2	70.2	
52	60.9	61.9	62.9	64.0	65.0	66.0	67.0	68.0	69.0	70.1	
53	60.8	61.8	62.8	63.9	64.9	65.9	66.9	67.9	68.9	70.0	
54	60.7	61.7	62.7	63.7	64.8	65.8	66.8	67.8	68.8	69.8	
55	60.6	61.6	62.6	63.6	64.6	65.6	66.6	67.7	68.7	69.7	
56	60.4	61.4	62.5	63.5	64.5	65.5	66.5	67.5	68.5	69.5	
57	60.3	61.3	62.4	63.4	64.4	65.4	66.4	67.4	68.4	69.4	
58	60.2	61.2	62.3	63.3	64.3	65.3	66.3	67.3	68.3	69.3	
59	60.1	61.1	62.1	63.1	64.1	65.1	66.1	67.1	68.1	69.1	
60	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0	
61	59.9	60.9	61.9	62.9	63.9	64.9	65.9	66.9	67.9	68.9	
62	59.8	60.8	61.8	62.8	63.8	64.8	65.8	66.8	67.8	68.8	
63	59.6	60.6	61.6	62.6	63.6	64.6	65.6	66.6	67.6	68.6	
64	59.5	60.5	61.5	62.5	63.5	64.5	65.5	66.5	67.5	68.5	





Observed Tempera- ture in °F	Observed Degrees A.P.I.										16.
	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	
	Corresponding Degrees A.P.I. at 60°F										
65	59.4	60.4	61.4	62.4	63.4	64.4	65.4	66.4	67.3	68.3	
66	59.3	60.3	61.3	62.3	63.2	64.2	65.2	66.2	67.2	68.2	
67	59.2	60.2	61.2	62.2	63.1	64.1	65.1	66.1	67.1	68.1	
68	59.1	60.1	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	
69	59.0	60.0	60.9	61.9	62.9	63.9	64.9	65.9	66.8	67.8	
70	58.9	59.8	60.8	61.8	62.8	63.8	64.7	65.7	66.7	67.7	
71	58.7	59.7	60.7	61.7	62.6	63.6	64.6	65.6	66.6	67.6	
72	58.6	59.6	60.6	61.6	62.5	63.5	64.5	65.4	66.4	67.4	
73	58.5	59.5	60.4	61.4	62.4	63.4	64.3	65.3	66.3	67.3	
74	58.4	59.4	60.3	61.3	62.3	63.2	64.2	65.2	66.2	67.2	
75	58.3	59.3	60.2	61.2	62.2	63.1	64.1	65.1	66.0	67.0	
76	58.2	59.2	60.1	61.1	62.0	63.0	64.0	65.0	65.9	66.9	
77	58.1	59.0	60.0	61.0	61.9	62.9	63.9	64.8	65.8	66.8	
78	58.0	58.9	59.9	60.9	61.8	62.8	63.7	64.7	65.7	66.6	
79	57.9	58.8	59.8	60.8	61.7	62.7	63.6	64.6	65.6	66.5	
80	57.8	58.7	59.7	60.6	61.6	62.6	63.5	64.5	65.4	66.4	
81	57.6	58.6	59.6	60.5	61.5	62.4	63.4	64.4	65.3	66.3	
82	57.5	58.5	59.4	60.4	61.4	62.3	63.3	64.2	65.2	66.2	
83	57.4	58.4	59.3	60.3	61.2	62.2	63.1	64.1	65.1	66.0	
84	57.3	58.3	59.2	60.2	61.1	62.1	63.0	64.0	64.9	65.9	
85	57.2	58.1	59.1	60.0	61.0	61.9	62.9	63.9	64.8	65.8	
86	57.1	58.0	59.0	59.9	60.9	61.8	62.8	63.7	64.7	65.6	
87	57.0	57.9	58.9	59.8	60.8	61.7	62.6	63.6	64.5	65.5	
88	56.9	57.8	58.7	59.7	60.6	61.6	62.5	63.5	64.4	65.4	
89	56.8	57.7	58.6	59.6	60.5	61.5	62.4	63.4	64.3	65.2	
90	56.7	57.6	58.5	59.5	60.4	61.4	62.3	63.2	64.2	65.1	
91	56.6	57.5	58.4	59.4	60.3	61.2	62.2	63.1	64.0	65.0	
92	56.5	57.4	58.3	59.2	60.2	61.1	62.0	63.0	63.9	64.9	
93	56.4	57.3	58.2	59.1	60.1	61.0	61.9	62.9	63.8	64.8	
94	56.2	57.2	58.1	59.0	59.9	60.9	61.8	62.8	63.7	64.6	
95	56.1	57.0	58.0	58.9	59.8	60.8	61.7	62.6	63.5	64.5	
96	56.0	56.9	57.8	58.8	59.7	60.6	61.6	62.5	63.4	64.4	
97	55.9	56.8	57.7	58.7	59.6	60.5	61.4	62.4	63.3	64.2	
98	55.8	56.7	57.6	58.6	59.5	60.4	61.3	62.3	63.2	64.1	
99	55.7	56.6	57.5	58.5	59.4	60.3	61.2	62.1	63.0	64.0	
100	55.6	56.5	57.4	58.4	59.3	60.2	61.1	62.0	62.9	63.9	
101	55.5	56.4	57.3	58.3	59.2	60.1	61.0	61.9	62.8	63.8	
102	55.4	56.3	57.2	58.2	59.1	60.0	60.9	61.8	62.7	63.6	
103	55.3	56.2	57.1	58.0	58.9	59.8	60.8	61.7	62.6	63.5	
104	55.2	56.1	57.0	57.9	58.8	59.7	60.6	61.6	62.5	63.4	
105	55.1	56.0	56.9	57.8	58.7	59.6	60.5	61.5	62.4	63.3	
106	55.0	55.9	56.8	57.7	58.6	59.5	60.4	61.3	62.2	63.2	
107	54.9	55.8	56.7	57.6	58.5	59.4	60.3	61.2	62.1	63.0	
108	54.8	55.7	56.6	57.5	58.4	59.3	60.2	61.1	62.0	62.9	
109	54.7	55.6	56.5	57.4	58.3	59.2	60.1	61.0	61.9	62.8	
110	54.6	55.5	56.4	57.3	58.2	59.1	60.0	60.9	61.8	62.7	
111	54.5	55.4	56.3	57.2	58.1	59.0	59.9	60.8	61.7	62.6	
112	54.4	55.3	56.2	57.1	58.0	58.8	59.7	60.6	61.5	62.5	
113	54.3	55.2	56.1	57.0	57.8	58.7	59.6	60.5	61.4	62.4	
114	54.2	55.1	56.0	56.9	57.7	58.6	59.5	60.4	61.3	62.3	
115	54.1	55.0	55.8	56.7	57.6	58.5	59.4	60.3	61.2	62.1	
116	54.0	54.9	55.7	56.6	57.5	58.4	59.3	60.2	61.1	62.0	
117	53.9	54.8	55.6	56.5	57.4	58.3	59.2	60.1	61.0	61.9	
118	53.8	54.7	55.5	56.4	57.3	58.2	59.1	60.0	60.9	61.8	
119	53.7	54.6	55.4	56.3	57.2	58.1	59.0	59.9	60.8	61.7	
120	53.6	54.5	55.3	56.2	57.1	58.0	58.9	59.8	60.6	61.5	
121	53.5	54.4	55.2	56.1	57.0	57.9	58.7	59.6	60.5	61.4	
122	53.4	54.3	55.1	56.0	56.9	57.8	58.6	59.5	60.4	61.3	
123	53.3	54.2	55.0	55.9	56.8	57.7	58.5	59.4	60.3	61.2	
124	53.2	54.1	54.9	55.8	56.7	57.6	58.4	59.3	60.2	61.1	
125	53.1	54.0	54.8	55.7	56.6	57.5	58.3	59.2	60.1	61.0	





Observed Tempera- ture in °F	Observed Degrees A.P.I.									
	70	71	72	73	84	75	76	77	78	79
	Corresponding Degrees A.P.I. at 60°F.									
0	78.8	80.0	81.2	82.3	83.4	84.6	85.7	86.9	88.1	89.2
1	78.7	79.8	81.0	82.1	83.3	84.4	85.6	86.7	87.9	89.0
2	78.5	79.7	80.9	82.0	83.1	84.3	85.4	86.5	87.7	88.8
3	78.4	79.5	80.7	81.8	82.9	84.1	85.2	86.3	87.5	88.7
4	78.2	79.3	80.5	81.6	82.7	83.9	85.0	86.2	87.3	88.5
5	78.1	79.2	80.4	81.5	82.6	83.7	84.9	86.0	87.2	88.3
6	77.9	79.0	80.2	81.3	82.4	83.6	84.7	85.8	87.0	88.1
7	77.8	78.9	80.0	81.1	82.2	83.4	84.5	85.7	86.8	88.0
8	77.6	78.7	79.9	81.0	82.1	83.2	84.4	85.5	86.7	87.8
9	77.4	78.5	79.7	80.8	81.9	83.1	84.2	85.3	86.5	87.6
10	77.3	78.4	79.5	80.6	81.7	82.9	84.0	85.1	86.3	87.4
11	77.1	78.2	79.4	80.5	81.6	82.7	83.8	85.0	86.1	87.2
12	77.0	78.1	79.2	80.3	81.4	82.5	83.6	84.8	85.9	87.0
13	76.8	77.9	79.1	80.1	81.2	82.4	83.5	84.6	85.7	86.9
14	76.7	77.8	78.9	80.0	81.1	82.2	83.3	84.4	85.6	86.7
15	76.5	77.6	78.7	79.8	80.9	82.0	83.1	84.2	85.4	86.5
16	76.4	77.5	78.6	79.7	80.8	81.9	83.0	84.1	85.2	86.3
17	76.2	77.3	78.4	79.5	80.6	81.7	82.8	83.9	85.0	86.1
18	76.1	77.2	78.3	79.4	80.4	81.5	82.6	83.7	84.9	86.0
19	75.9	77.0	78.1	79.2	80.3	81.4	82.5	83.6	84.7	85.8
20	75.8	76.9	78.0	79.0	80.1	81.2	82.3	83.4	84.5	85.6
21	75.6	76.7	77.8	78.9	79.9	81.0	82.1	83.2	84.3	85.4
22	75.5	76.5	77.6	78.7	79.8	80.9	82.0	83.0	84.1	85.2
23	75.3	76.4	77.5	78.6	79.6	80.7	81.8	82.9	84.0	85.1
24	75.1	76.2	77.3	78.4	79.4	80.5	81.6	82.7	83.8	84.9
25	75.0	76.1	77.2	78.2	79.3	80.4	81.5	82.5	83.6	84.7
26	74.9	75.9	77.0	78.1	79.1	80.2	81.3	82.4	83.5	84.6
27	74.7	75.8	76.9	77.9	79.0	80.1	81.2	82.2	83.3	84.4
28	74.6	75.6	76.7	77.8	78.8	79.9	81.0	82.1	83.2	84.2
29	74.4	75.5	76.6	77.6	78.7	79.8	80.8	81.9	83.0	84.1
30	74.3	75.3	76.4	77.5	78.5	79.6	80.7	81.7	82.8	83.9
31	74.1	75.2	76.3	77.3	78.4	79.4	80.5	81.6	82.7	83.7
32	74.0	75.0	76.1	77.2	78.2	79.3	80.4	81.4	82.5	83.6
33	73.8	74.9	76.0	77.0	78.1	79.1	80.2	81.2	82.3	83.4
34	73.7	74.7	75.8	76.9	77.9	79.0	80.0	81.1	82.2	83.2
35	73.5	74.6	75.6	76.7	77.7	78.8	79.8	80.9	82.0	83.0
36	73.4	74.4	75.5	76.5	77.6	78.6	79.7	80.7	81.8	82.9
37	73.2	74.3	75.3	76.4	77.4	78.5	79.5	80.6	81.6	82.7
38	73.1	74.1	75.2	76.2	77.3	78.3	79.4	80.4	81.5	82.5
39	72.9	74.0	75.0	76.1	77.1	78.2	79.2	80.3	81.3	82.4
40	72.8	73.8	74.9	75.9	77.0	78.0	79.1	80.1	81.2	82.2
41	72.7	73.7	74.8	75.8	76.8	77.9	78.9	79.9	81.0	82.0
42	72.5	73.5	74.6	75.6	76.7	77.7	78.8	79.8	80.8	81.9
43	72.4	73.4	74.5	75.5	76.5	77.6	78.6	79.6	80.7	81.7
44	72.2	73.2	74.3	75.3	76.3	77.4	78.4	79.4	80.5	81.5





Observed Temperature in °F.	Observed Degrees A.P.I.									
	70	71	72	73	74	75	76	77	78	79
	Corresponding Degrees A.P.I. at 60°F.									
45	72.1	73.1	74.2	75.2	76.2	77.2	78.3	79.3	80.3	81.4
46	71.9	72.9	74.0	75.0	76.0	77.1	78.1	79.1	80.2	81.2
47	71.8	72.8	73.9	74.9	75.9	76.9	78.0	79.0	80.0	81.1
48	71.7	72.7	73.7	74.7	75.7	76.8	77.8	78.8	79.8	80.9
49	71.5	72.5	73.6	74.6	75.6	76.6	77.7	78.7	79.7	80.7
50	71.4	72.4	73.4	74.5	75.5	76.5	77.5	78.5	79.6	80.6
51	71.2	72.2	73.3	74.3	75.3	76.3	77.4	78.4	79.4	80.4
52	71.1	72.1	73.2	74.2	75.2	76.2	77.2	78.2	79.3	80.3
53	71.0	72.0	73.0	74.0	75.0	76.0	77.1	78.1	79.1	80.1
54	70.8	71.8	72.9	73.9	74.9	75.9	76.9	77.9	78.9	80.0
55	70.7	71.7	72.7	73.7	74.7	75.7	76.8	77.8	78.8	79.8
56	70.5	71.5	72.6	73.6	74.6	75.6	76.6	77.6	78.6	79.6
57	70.4	71.4	72.4	73.4	74.4	75.4	76.5	77.5	78.5	79.5
58	70.3	71.3	72.3	73.3	74.3	75.3	76.3	77.3	78.3	79.3
59	70.1	71.1	72.2	73.2	74.2	75.2	76.2	77.2	78.2	79.2
60	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
61	69.9	70.9	71.9	72.9	73.9	74.9	75.9	76.8	77.8	78.8
62	69.8	70.8	71.8	72.7	73.7	74.7	75.7	76.7	77.7	78.7
63	69.6	70.6	71.6	72.6	73.6	74.6	75.6	76.5	77.5	78.5
64	69.5	70.5	71.5	72.4	73.4	74.4	75.4	76.4	77.4	78.4
65	69.3	70.3	71.3	72.3	73.3	74.3	75.2	76.2	77.2	78.2
66	69.2	70.2	71.2	72.2	73.1	74.1	75.1	76.1	77.1	78.1
67	69.1	70.1	71.1	72.0	73.0	74.0	75.0	75.9	76.9	77.9
68	68.9	69.9	70.9	71.9	72.9	73.9	74.8	75.8	76.8	77.8
69	68.8	69.8	70.8	71.7	72.7	73.7	74.7	75.6	76.6	77.6
70	68.6	69.6	70.6	71.6	72.6	73.6	74.5	75.5	76.5	77.5
71	68.5	69.5	70.5	71.4	72.4	73.4	74.4	75.3	76.3	77.3
72	68.4	69.4	70.4	71.3	72.3	73.3	74.2	75.2	76.2	77.1
73	68.3	69.3	70.3	71.2	72.2	73.1	74.1	75.0	76.0	77.0
74	68.1	69.1	70.1	71.0	72.0	73.0	73.9	74.9	75.9	76.8
75	68.0	69.0	70.0	70.9	71.9	72.9	73.8	74.8	75.8	76.7
76	67.9	68.8	69.8	70.8	71.7	72.7	73.7	74.6	75.6	76.6
77	67.7	68.7	69.7	70.6	71.6	72.6	73.5	74.5	75.5	76.4
78	67.6	68.6	69.6	70.5	71.5	72.4	73.4	74.4	75.3	76.3
79	67.5	68.4	69.4	70.4	71.3	72.3	73.2	74.2	75.2	76.1
80	67.4	68.3	69.3	70.2	71.2	72.2	73.1	74.1	75.0	76.0
81	67.2	68.2	69.1	70.1	71.0	72.0	73.0	73.9	74.9	75.8
82	67.1	68.1	69.0	70.0	70.9	71.9	72.8	73.8	74.7	75.6
83	67.0	67.9	68.9	69.8	70.8	71.7	72.6	73.6	74.6	75.5
84	66.8	67.8	68.7	69.7	70.6	71.6	72.5	73.4	74.4	75.3
85	66.7	67.6	68.6	69.5	70.5	71.4	72.4	73.3	74.3	75.2
86	66.6	67.5	68.5	69.4	70.4	71.3	72.2	73.2	74.1	75.1
87	66.4	67.4	68.4	69.3	70.2	71.2	72.1	73.0	74.0	74.9
88	66.3	67.2	68.2	69.1	70.1	71.0	72.0	72.9	73.8	74.8
89	66.2	67.1	68.1	69.0	70.0	70.9	71.8	72.8	73.7	74.6
90	66.1	67.0	68.0	68.9	69.8	70.8	71.7	72.6	73.6	74.5



Observed tempera- ture in °F.	Observed Degrees A.P.I.									
	80	81	82	83	84	85	86	87	88	89
	Corresponding Degrees A.P.I. at 60°F.									
0	90.4	91.6	92.7	93.9	95.1	96.3	97.5	98.7	99.9	101.1
1	90.2	91.4	92.5	93.7	94.9	96.1	97.3	98.5	99.7	100.9
2	90.0	91.2	92.4	93.5	94.7	95.9	97.1	98.3	99.5	100.7
3	89.8	91.0	92.2	93.3	94.5	95.7	96.9	98.1	99.3	100.4
4	89.6	90.8	92.0	93.1	94.3	95.5	96.7	97.9	99.1	100.2
5	89.4	90.6	91.8	92.9	94.1	95.3	96.5	97.7	98.9	100.0
6	89.3	90.4	91.6	92.7	93.9	95.1	96.3	97.5	98.7	99.8
7	89.1	90.2	91.4	92.5	93.7	94.9	96.0	97.2	98.4	99.6
8	88.9	90.0	91.2	92.4	93.5	94.7	95.8	97.0	98.2	99.3
9	88.7	89.8	91.0	92.2	93.3	94.5	95.6	96.8	98.0	99.1
10	88.6	89.7	90.8	92.0	93.1	94.2	95.4	96.6	97.8	98.9
11	88.4	89.5	90.6	91.8	92.9	94.0	95.2	96.4	97.5	98.7
12	88.2	89.3	90.4	91.6	92.7	93.8	95.0	96.1	97.3	98.4
13	88.0	89.1	90.2	91.4	92.5	93.6	94.8	95.9	97.1	98.2
14	87.8	88.9	90.0	91.2	92.3	93.4	94.6	95.7	96.9	98.0
15	87.6	88.7	89.9	91.0	92.1	93.2	94.4	95.5	96.7	97.8
16	87.5	88.6	89.7	90.8	91.9	93.0	94.2	95.3	96.5	97.6
17	87.3	88.4	89.5	90.6	91.7	92.8	94.0	95.1	96.3	97.4
18	87.1	88.2	89.3	90.4	91.5	92.6	93.8	94.9	96.1	97.2
19	86.9	88.0	89.1	90.2	91.3	92.4	93.6	94.7	95.9	97.0
20	86.7	87.8	88.9	90.0	91.1	92.2	93.4	94.5	95.7	96.8
21	86.5	87.6	88.7	89.8	90.9	92.0	93.2	94.3	95.4	96.5
22	86.4	87.5	88.6	89.7	90.8	91.9	93.0	94.1	95.2	96.3
23	86.2	87.3	88.4	89.5	90.6	91.7	92.8	93.9	95.0	96.1
24	86.0	87.1	88.2	89.3	90.4	91.5	92.6	93.7	94.8	95.9
25	85.8	86.9	88.0	89.1	90.2	91.3	92.4	93.5	94.6	95.7
26	85.6	86.7	87.8	88.9	90.0	91.1	92.2	93.3	94.4	95.5
27	85.4	86.5	87.6	88.7	89.8	90.9	92.0	93.1	94.2	95.3
28	85.3	86.4	87.4	88.5	89.6	90.7	91.8	92.9	94.0	95.1
29	85.1	86.2	87.3	88.4	89.4	90.5	91.6	92.7	93.8	94.9
30	84.9	86.0	87.1	88.2	89.3	90.3	91.4	92.5	93.6	94.7
31	84.8	85.8	86.9	88.0	89.1	90.2	91.2	92.3	93.4	94.5
32	84.6	85.7	86.7	87.8	88.9	90.0	91.0	92.1	93.2	94.3
33	84.4	85.5	86.5	87.6	88.7	89.8	90.8	91.9	93.0	94.1
34	84.2	85.3	86.4	87.4	88.5	89.6	90.7	91.7	92.8	93.9
35	84.1	85.1	86.2	87.2	88.3	89.4	90.5	91.5	92.6	93.7
36	83.9	85.0	86.0	87.1	88.2	89.2	90.3	91.3	92.4	93.5
37	83.7	84.8	85.9	86.9	88.0	89.0	90.1	91.2	92.2	93.3
38	83.6	84.6	85.7	86.7	87.8	88.8	89.9	91.0	92.1	93.1
39	83.4	84.5	85.5	86.6	87.6	88.7	89.7	90.8	91.9	92.9
40	83.2	84.3	85.4	86.4	87.5	88.5	89.6	90.6	91.7	92.7
41	83.1	84.1	85.2	86.2	87.3	88.3	89.4	90.4	91.5	92.5
42	82.9	83.9	85.0	86.0	87.1	88.1	89.2	90.2	91.3	92.4
43	82.7	83.8	84.8	85.9	86.9	88.0	89.0	90.0	91.1	92.2
44	82.6	83.6	84.7	85.7	86.7	87.8	88.8	89.9	90.9	92.0





Observed Temperature in °F.	Observed Degrees A.P.I.									
	80	81	82	83	84	85	86	87	88	89
	Corresponding Degrees A.P.I. at 60°F.									
45	82.4	83.4	84.5	85.5	86.6	87.6	88.6	89.7	90.7	91.8
46	82.2	83.2	84.3	85.3	86.4	87.4	88.4	89.5	90.5	91.6
47	82.1	83.1	84.1	85.2	86.2	87.2	88.3	89.3	90.4	91.4
48	81.9	82.9	84.0	85.0	86.0	87.1	88.1	89.1	90.2	91.2
49	81.8	82.8	83.8	84.8	85.9	86.9	87.9	88.9	90.0	91.0
50	81.6	82.6	83.6	84.7	85.7	86.7	87.7	88.8	89.8	90.8
51	81.4	82.4	83.5	84.5	85.5	86.6	87.6	88.6	89.6	90.7
52	81.3	82.3	83.3	84.3	85.4	86.4	87.4	88.4	89.4	90.5
53	81.1	82.1	83.1	84.1	85.2	86.2	87.2	88.2	89.2	90.3
54	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.1	90.1
55	80.8	81.8	82.8	83.8	84.8	85.8	86.8	87.8	88.9	89.9
56	80.6	81.6	82.6	83.6	84.7	85.7	86.7	87.7	88.7	89.7
57	80.5	81.5	82.5	83.5	84.5	85.5	86.5	87.5	88.5	89.5
58	80.3	81.3	82.3	83.3	84.3	85.3	86.3	87.3	88.3	89.3
59	80.2	81.2	82.2	83.2	84.2	85.2	86.2	87.2	88.2	89.2
60	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
61	79.8	80.8	81.8	82.8	83.8	84.8	85.8	86.8	87.8	88.8
62	79.7	80.7	81.7	82.7	83.7	84.7	85.7	86.7	87.7	88.7
63	79.5	80.5	81.5	82.5	83.5	84.5	85.5	86.5	87.5	88.5
64	79.4	80.4	81.3	82.3	83.3	84.3	85.3	86.3	87.3	88.3
65	79.2	80.2	81.2	82.2	83.2	84.1	85.1	86.1	87.1	88.1
66	79.1	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	87.9
67	78.9	79.9	80.9	81.9	82.9	83.8	84.8	85.8	86.8	87.8
68	78.8	79.7	80.7	81.7	82.7	83.6	84.6	85.6	86.6	87.6
69	78.6	79.6	80.6	81.5	82.5	83.5	84.5	85.5	86.5	87.4
70	78.4	79.4	80.4	81.4	82.4	83.3	84.3	85.3	86.3	87.2
71	78.3	79.3	80.2	81.2	82.2	83.1	84.1	85.1	86.1	87.0
72	78.1	79.1	80.1	81.1	82.0	83.0	84.0	84.9	85.9	86.9
73	78.0	78.9	79.9	80.9	81.9	82.8	83.8	84.8	85.8	86.7
74	77.8	78.8	79.8	80.7	81.7	82.7	83.6	84.6	85.6	86.5
75	77.7	78.7	79.6	80.6	81.6	82.5	83.5	84.4	85.4	86.4
76	77.5	78.5	79.4	80.4	81.4	82.3	83.3	84.3	85.2	86.2
77	77.4	78.4	79.3	80.3	81.2	82.2	83.2	84.1	85.1	86.0
78	77.2	78.2	79.1	80.1	81.1	82.0	83.0	83.9	84.9	85.8
79	77.1	78.0	79.0	79.9	80.9	81.8	82.8	83.8	84.7	85.7
80	76.9	77.8	78.8	79.8	80.7	81.7	82.6	83.6	84.6	85.5
81	76.8	77.7	78.7	79.6	80.6	81.5	82.5	83.4	84.4	85.3
82	76.6	77.5	78.5	79.4	80.4	81.3	82.3	83.2	84.2	85.1
83	76.5	77.4	78.4	79.3	80.3	81.2	82.2	83.1	84.1	85.0
84	76.3	77.2	78.2	79.1	80.1	81.0	82.0	82.9	83.9	84.8
85	76.2	77.1	78.0	79.0	79.9	80.9	81.8	82.8	83.7	84.7
86	76.0	77.0	77.9	78.8	79.8	80.7	81.7	82.6	83.6	84.5
87	75.9	76.8	77.7	78.7	79.6	80.6	81.5	82.5	83.4	84.3
88	75.7	76.6	77.6	78.5	79.5	80.4	81.3	82.3	83.2	84.2
89	75.6	76.5	77.4	78.4	79.3	80.3	81.2	82.2	83.1	84.0
90	75.5	76.4	77.3	78.2	79.2	80.1	81.0	82.0	82.9	83.8





Observed Tempera- ture in °F.	Observed Degrees A.P.I.									
	90	91	92	93	94	95	96	97	98	99
	Corresponding Degrees A.P.I. at 60°F.									
0	102.3	103.5	104.7	105.9	107.1	108.3	109.5	110.7	111.9	113.1
1	102.1	103.3	104.5	105.7	106.8	108.0	109.3	110.5	111.7	112.8
2	101.9	103.0	104.2	105.4	106.6	107.8	109.0	110.2	111.4	112.6
3	101.6	102.8	104.0	105.2	106.4	107.6	108.8	110.0	111.2	112.3
4	101.4	102.6	103.8	105.0	106.1	107.3	108.5	109.7	110.9	112.1
5	101.2	102.3	103.5	104.7	105.9	107.1	108.3	109.5	110.6	111.8
6	101.0	102.1	103.3	104.5	105.7	106.8	108.0	109.2	110.4	111.6
7	100.7	101.9	103.1	104.2	105.4	106.6	107.8	109.0	110.1	111.3
8	100.5	101.6	102.8	104.0	105.2	106.4	107.5	108.7	109.9	111.1
9	100.3	101.4	102.6	103.8	104.9	106.1	107.3	108.4	109.6	110.8
10	100.0	101.2	102.4	103.6	104.7	105.9	107.0	108.2	109.4	110.5
11	99.8	101.0	102.2	103.3	104.4	105.7	106.8	108.0	109.1	110.3
12	99.6	100.7	101.9	103.1	104.2	105.4	106.6	107.7	108.9	110.0
13	99.4	100.5	101.7	102.8	104.0	105.2	106.3	107.5	108.6	109.8
14	99.2	100.3	101.5	102.6	103.7	104.9	106.1	107.2	108.4	109.6
15	99.0	100.1	101.3	102.4	103.5	104.7	105.8	107.0	108.1	109.3
16	98.7	99.9	101.0	102.2	103.3	104.5	105.6	106.8	107.9	109.0
17	98.5	99.6	100.8	101.9	103.0	104.2	105.4	106.5	107.6	108.8
18	98.3	99.4	100.6	101.7	102.8	104.0	105.1	106.3	107.4	108.5
19	98.1	99.2	100.4	101.5	102.6	103.7	104.8	106.0	107.1	108.2
20	97.9	99.0	100.1	101.2	102.3	103.5	104.6	105.8	106.9	108.0
21	97.7	98.8	99.9	101.0	102.1	103.3	104.4	105.5	106.6	107.8
22	97.5	98.6	99.7	100.8	101.9	103.1	104.2	105.3	106.4	107.5
23	97.2	98.3	99.5	100.6	101.7	102.8	103.9	105.1	106.2	107.3
24	97.0	98.1	99.3	100.4	101.5	102.6	103.7	104.8	106.0	107.1
25	96.8	97.9	99.1	100.2	101.3	102.4	103.5	104.6	105.7	106.8
26	96.6	97.7	98.8	99.9	101.0	102.2	103.3	104.4	105.5	106.6
27	96.4	97.5	98.6	99.7	100.8	101.9	103.0	104.1	105.2	106.4
28	96.2	97.3	98.4	99.5	100.6	101.7	102.8	103.9	105.0	106.1
29	96.0	97.1	98.2	99.3	100.4	101.5	102.6	103.7	104.8	105.9
30	95.8	96.9	98.0	99.1	100.2	101.3	102.4	103.4	104.5	105.6
31	95.6	96.7	97.8	98.8	99.9	101.0	102.1	103.2	104.3	105.4
32	95.4	96.5	97.6	98.6	99.7	100.8	101.9	103.0	104.1	105.2
33	95.2	96.3	97.4	98.4	99.5	100.6	101.7	102.8	103.9	105.0
34	95.0	96.1	97.2	98.2	99.3	100.4	101.5	102.5	103.6	104.7
35	94.8	95.9	97.0	98.0	99.1	100.2	101.3	102.3	103.4	104.5
36	94.6	95.7	96.8	97.8	98.9	100.0	101.0	102.1	103.2	104.3
37	94.4	95.5	96.6	97.6	98.7	99.8	100.8	101.9	103.0	104.1
38	94.2	95.3	96.4	97.4	98.5	99.6	100.6	101.7	102.7	103.8
39	94.0	95.1	96.1	97.2	98.2	99.3	100.4	101.4	102.5	103.6
40	93.8	94.9	95.9	97.0	98.0	99.1	100.2	101.2	102.3	103.4
41	93.6	94.7	95.7	96.8	97.8	98.9	99.9	101.0	102.0	103.1
42	93.4	94.5	95.5	96.6	97.6	98.7	99.7	100.8	101.8	102.9
43	93.2	94.3	95.3	96.4	97.4	98.5	99.5	100.6	101.6	102.7
44	93.0	94.1	95.1	96.2	97.2	98.2	99.3	100.3	101.4	102.5



Observed Tempera- ture in °F.	Observed Degrees A.P.I.									
	90	91	92	93	94	95	96	97	98	99
	Corresponding Degrees A.P.I. at 60°F.									
45	92.8	93.9	94.9	95.9	97.0	98.0	99.1	100.1	101.2	102.2
46	92.6	93.7	94.7	95.7	96.8	97.8	98.9	99.9	101.0	102.0
47	92.4	93.5	94.5	95.5	96.6	97.6	98.7	99.7	100.7	101.8
48	92.2	93.3	94.3	95.3	96.4	97.4	98.5	99.5	100.5	101.6
49	92.0	93.1	94.1	95.1	96.2	97.2	98.2	99.3	100.3	101.3
50	91.9	92.9	93.9	94.9	96.0	97.0	98.0	99.0	100.1	101.1
51	91.7	92.7	93.7	94.8	95.8	96.8	97.8	98.8	99.9	100.9
52	91.5	92.5	93.6	94.6	95.6	96.6	97.6	98.6	99.7	100.7
53	91.3	92.3	93.4	94.4	95.4	96.4	97.4	98.4	99.5	100.5
54	91.1	92.1	93.2	94.2	95.2	96.2	97.2	98.2	99.3	100.3
55	90.9	91.9	93.0	94.0	95.0	96.0	97.0	98.0	99.0	100.1
56	90.7	91.7	92.8	93.8	94.8	95.8	96.8	97.8	98.8	99.9
57	90.5	91.5	92.6	93.6	94.6	95.6	96.6	97.6	98.6	99.6
58	90.3	91.3	92.4	93.4	94.4	95.4	96.4	97.4	98.4	99.4
59	90.2	91.2	92.2	93.2	94.2	95.2	96.2	97.2	98.2	99.2
60	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0	99.0
61	89.8	90.8	91.8	92.8	93.8	94.8	95.8	96.8	97.8	98.8
62	89.7	90.6	91.6	92.6	93.6	94.6	95.6	96.6	97.6	98.6
63	89.4	90.4	91.4	92.4	93.4	94.4	95.4	96.4	97.4	98.4
64	89.3	90.2	91.2	92.2	93.2	94.2	95.2	96.2	97.2	98.2
65	89.1	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0
66	88.9	89.9	90.8	91.8	92.8	93.8	94.8	95.8	96.8	97.8
67	88.7	89.7	90.7	91.6	92.6	93.6	94.6	95.6	96.6	97.5
68	88.6	89.5	90.5	91.5	92.5	93.5	94.4	95.4	96.4	97.3
69	88.4	89.4	90.3	91.3	92.3	93.3	94.2	95.2	96.2	97.1
70	88.2	89.2	90.1	91.1	92.1	93.1	94.0	95.0	96.0	96.9
71	88.0	89.0	89.9	90.9	91.9	92.9	93.8	94.8	95.8	96.7
72	87.8	88.8	89.8	90.7	91.7	92.7	93.6	94.6	95.6	96.5
73	87.7	88.6	89.6	90.6	91.5	92.5	93.4	94.4	95.4	96.3
74	87.5	88.5	89.4	90.4	91.3	92.3	93.2	94.2	95.2	96.1
75	87.3	88.3	89.2	90.2	91.2	92.1	93.1	94.0	95.0	96.0
76	87.2	88.1	89.1	90.0	91.0	92.0	92.9	93.9	94.8	95.8
77	87.0	87.9	88.9	89.8	90.8	91.8	92.7	93.7	94.6	95.6
78	86.8	87.7	88.7	89.7	90.6	91.6	92.5	93.5	94.4	95.4
79	86.6	87.6	88.5	89.5	90.4	91.4	92.3	93.3	94.2	95.2
80	86.5	87.4	88.4	89.3	90.2	91.2	92.1	93.1	94.0	95.0
81	86.3	87.2	88.2	89.1	90.1	91.0	91.9	92.9	93.8	94.8
82	86.1	87.0	88.0	88.9	89.9	90.8	91.8	92.7	93.6	94.6
83	86.0	86.9	87.8	88.8	89.7	90.7	91.6	92.5	93.4	94.4
84	85.8	86.7	87.6	88.6	89.5	90.5	91.4	92.3	93.2	94.2
85	85.6	86.5	87.5	88.4	89.4	90.3	91.2	92.2	93.1	94.0
86	85.4	86.4	87.3	88.2	89.2	90.1	91.0	92.0	92.9	93.8
87	85.3	86.2	87.1	88.0	89.0	89.9	90.8	91.8	92.7	93.6
88	85.1	86.0	87.0	87.9	88.8	89.7	90.6	91.6	92.5	93.4
89	84.9	85.9	86.8	87.7	88.6	89.6	90.5	91.4	92.3	93.2
90	84.8	85.7	86.6	87.5	88.5	89.4	90.3	91.2	92.2	93.1







